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LOYOLA UNIVERSITY CHICAGO

EXPOSURE TO COMMUNITY VIOLENCE AND SOCIAL MALADJUSTMENT
AMONG URBAN AFRICAN AMERICAN YOUTH:
THE ROLE OF EMOTION DYSREGULATION

A THESIS SUBMITTED TO
THE FACULTY OF THE GRADUATE SCHOOL
IN CANDIDACY FOR THE DEGREE OF
MASTER OF ARTS

PROGRAM IN CLINICAL PSYCHOLOGY

BY

DEVIN C. CAREY

CHICAGO, IL

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ABSTRACT

The goal of the present study was to further previous research that has focused on the detrimental outcomes of violence exposure by identifying the mechanisms that influence children's psychosocial vulnerabilities. Specifically, it examined emotion regulation as a possible mediator of community violence exposure to social adjustment. Moreover, because of the evidence that children living in inner city communities are chronically exposed to violence, this study longitudinally explored the reciprocal and perpetuating relationship between exposure to violence and child social maladjustment. Participants were 268 African American students (*M* age = 11.65 years, 40% males and 60% females) from six inner city Chicago public schools in high crime neighborhoods. Data was collected longitudinally for one week each year over three years using questionnaires and the Experience Sampling Method (ESM) . Hypotheses were tested using Structural Equation Modeling (SEM). Results revealed that exposure to community violence was not consistently linked to social maladjustment and when the relationship between the variables was significant, it was more often in the opposite direction of what was hypothesized, such that children experiencing more violence exposure had lower levels of social maladjustment, particularly in the 8th grade. Although results did not suggest mediation, there was a strong relationship for both witnessing violence and violent victimization to emotion dysregulation. Overall, children who experienced greater community violence reported more difficulty regulating their

emotions. Finally, transactional results revealed that there are certain periods in development in which being more socially maladjusted may put a youth in risk for more exposure to violence. Results of the present study have important implications for interventions for inner-city youth exposed to violence.

CHAPTER ONE

INTRODUCTION

African American youth living in low-income inner-city neighborhoods face daily social and economic disadvantages that put them at heightened risk for adjustment difficulties and psychopathology. While the challenges are numerous, the most significant stressor may be the violence that these children are exposed to in their communities. Exposure to pervasive community violence disrupts a child's psychological development and may lead to difficulties interacting with and relating to others.

Extensive work has been done in understanding the various direct effects of exposure to community violence on multiple outcomes. However, the mechanisms that mediate the link between exposure to violence and child adjustment are less well studied, limiting our understanding of child social adjustment (Lynch, 2003). Thus, the processes that clarify the relationship between these two variables need to be more fully researched. By examining mediational models and using well-designed methods, researchers can investigate the possible causal pathways of child maladjustment. This knowledge is essential to appropriately design and assess prevention programs aimed at urban youth.

With these objectives in mind, the current study examined the reciprocal effects of low-income, inner city youth's exposure to violence and social adjustment. The impact of violence goes beyond the period immediately following the exposure and

produces long-term negative effects on the children exposed. Furthermore, the effects of exposure to community violence are determined not only by the type of violence, but also the child's own cognitive, emotional, and social competence (Marans & Adelman, 1997). For this reason, this study aimed to apply a developmental perspective to understanding community violence recommended by researchers (e.g. Margolin & Gordis, 2000) by examining both measure both the consequences of community violence on adjustment in adolescence and possible mechanisms that may contribute to these outcomes. Specifically, the present study examined emotion regulation as a possible mediator of community violence exposure to social maladjustment. Furthermore, because of the evidence that children living in inner city communities are chronically exposed to violence, this study longitudinally explored the reciprocal and perpetuating relationship between exposure to violence and child social maladjustment over a 3-year period with a large-scale sample.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Exposure to Community Violence

Children's exposure to community violence has become a major public health problem in the United States (Finkelhor, Turner, Ormod, Hamby, & Kracke, 2009). Although a variety of risk factors are associated with exposure to violence, minority children living in low-income, inner-city neighborhoods seem to be disproportionately affected (Stein, Jaycox, Kataoka, Rhodes, & Vestal, 2003). Moreover, children living in inner-city communities seem to be repeatedly and chronically exposed to violence due to the pervasive amounts of violence occurring in their neighborhoods (Richters & Martinez, 1993). This exposure has been characterized as occurring through both witnessing violence and violent victimization, with some statistics reporting that that 60-70% of inner city youth have been victimized by at least one violent act and 80-90% have witnessed violence in their community (Bender & Roberts, 2009). Moreover, the violence experienced by these children is often severe. For example, Bell & Jenkins (1993) surveyed elementary school children in Chicago and found that three out of four children had witnessed a robbery, stabbing, shooting or killing. These statistics illustrate the need for researchers and policy makers to fully examine the role of exposure to violence in the lives of children. In addition to the obvious threats to a child's physical and mental health, repeated exposure to violence over time, as is seen in inner city

neighborhoods, may alter a child's developmental trajectories and result in more negative outcomes. In this way, researchers suggest that violence may alter children's views of the world and of themselves, not only shifting their perceptions about the meaning and purpose of life, but also their expectations for future happiness (Garbarino, Kostelny, & Dubow, 1991).

In the community violence literature, researchers have attempted to distinguish between witnessing violence and violent victimization. While the former refers to an indirect exposure, (e.g. viewing a violent act), the latter encompasses actually experiencing an event, such as an assault or a robbery. Not surprisingly, it appears that community violence may have differential outcomes based on the type of exposure. While some researchers have found that both witnessing and victimization have harmful effects on a child's development (Richters & Martinez, 1993), it appears that actually becoming a victim of community violence may be more detrimental (Fitzpatrick & Boldizar, 1993). Yet, many studies do not attempt to fully examine the differences in the types of exposure (Salzinger, Feldman, Stockhammer, & Hood, 2002). Thus, this study examined the effects of witnessing violence and violent victimization separately.

Exposure to Violence and General Child Adjustment

Researchers have used a variety of methods and strategies to explore the relationship of exposure to violence to adjustment in childhood. Namely, they have attempted to establish links between violence exposure and the development of post-traumatic stress disorder, internalizing psychopathology, externalizing problems, and other types of maladjustment, such as substance use, impaired social relationships, and poor academic performance. While the consequences of violence exposure appear to

depend on several factors, such as the persistency and type of violence, individual child characteristics, or family processes, research has consistently demonstrated that children exposed to violence have negative outcomes (for a review, see Fowler, Tompsett, Braciszewski, Jacques-Tiura, & Baltes, 2009).

Externalizing symptoms have a relatively well-established association with exposure to violence in the literature, as longitudinal studies have found that exposure to violence is related to increased antisocial behavior (Miller et al., 1999), aggression (Gorman-Smith, Henry, & Tolan, 1998), and violent behavior (Farrell & Bruce, 1997), even when controlling for prior levels of these problems. Interestingly, externalizing behaviors may develop even when exposed to low levels of violence (Bradshaw, Rodgers, Ghandour, & Garbarino, 2009). It is theorized that social learning, in which children exposed to violence observe and then imitate violent behavior, can account for the relation between exposure to violence and the later development of externalizing disorders (Dodge, Lochman, Harnish, Bates, & Pettit, 1997). In addition, externalizing behavior may put children at greater risk for more exposure to violence (Lynch & Cicchetti, 1998). In other words, there may be a bidirectional relationship between externalizing behavior and exposure to community violence. However, all of these relationships need to be studied in greater depth.

Internalizing symptoms, such as depression and anxiety have been indicated, yet less consistently than externalizing disorders (Gorman-Smith, Henry, & Tolan, 1998; Kliever, Lepore, Oskin, & Johnson, 1998; Lynch & Cicchetti, 1993). Some researchers have found that the development of internalizing symptoms depends on whether the child witnesses violence or is victimized by violence. For example, Fitzpatrick and Boldizar

(1993) found that violent victimization, but not witnessing violence, predicted depression in African American youth. Other authors have theorized that the differential outcomes may depend on the gender of the child, such that girls exhibit more internalizing symptoms than boys as a result of violence exposure (Gorman-Smith, Henry, & Tolan, 1998; McGee, 2003). Furthermore, it is possible that other factors, such as a child's ability to cope (McGee, 2003), social support (Hammack, Richards, Luo, Edlynn, & Roy, 2004), or the level and severity of violence exposure (Lynch & Cicchetti, 1998), may influence whether or not a child develops internalizing symptoms.

However, the most powerful associations with violence exposure are seen in the form of post-traumatic stress symptoms (Fowler et al., 2009). These symptoms include sleep disturbances, irritability, hypervigilance, heightened startle responses, and flashbacks of the original trauma (Osofsky, 1995). Researchers have linked these symptoms not only to encountering personal trauma, as is seen in children who are victimized by community violence, but also the constant feelings of helplessness and fear for safety that children living in violent neighborhoods continuously experience (Fowler et al., 2009). Even when children do not meet the full criteria for post-traumatic stress disorder (PTSD), youth may demonstrate other negative responses related to their trauma that have deleterious effects on their social-emotional development (Ortiz, Richards, Kohl, & Zaddach, 2008).

Exposure to Violence and Social Adjustment

In addition to these outcomes, exposure to high levels of community violence may result in behavioral and emotional difficulties that significantly impact social relationships. Children exposed to all types of violence demonstrate problems in

connecting with their peers or interacting appropriately in social situations, as a result of feelings of uncertainty about themselves and their relationships with others (Lynch, 2003). To support this idea, researchers have found that college students exposed to violence report interpersonal problems (Scarpa et al., 2002), peers reject children who have been maltreated (Bolger, Patterson, & Kupersmidt, 1998), and domestic violence decreases children's ability to connect in relationships (Katz, Hessler, & Anest, 2007). Consistent with these results, community violence is associated with peer rejection and mistreatment (Schwartz & Proctor, 2000). Because school-age social difficulties prefigure negative developmental outcomes and early maladjustment predicts later disorders, understanding the effects of exposure to violence on social adjustment is essential to improving developmental trajectories of these children. Furthermore, since social support has been established as a protective factor for violence exposure, this area of adjustment is an important target for intervention (Hammack et al., 2004).

Social Adjustment/Maladjustment

The middle school years are characterized by developmental transitions, which are even more challenging in inner-city neighborhoods plagued by violence. Of all areas of mental health, such as depression, anxiety, and behavior problems, social adjustment is the most significant area of well-being, as it has both concurrent and predictive effects for child psychopathology (Dougherty, 2006). Thus, this study will focus on children's difficulties with adjustment in the social realm, or in other words, social maladjustment.

Social adjustment can broadly be understood as the interaction between an individual and their social environment (Clare, Corney, & Cairns, 1984). In children, Crick and Dodge (1994) have conceptualized social adjustment as the degree to which

children get along with their peers, engage in adaptive competent social behavior, as well as the extent to which they do not demonstrate aversive, incompetent behavior. In this way, a socially adjusted child is characterized by positive social interactions and friendships with peers, social maladjustment often includes aggression, social withdrawal, or peer rejection. Therefore, an understanding of social adjustment includes a child's own positive and negative actions, in addition to the reactions of others to the child.

From this description of social adjustment, it is not surprising that differences have arisen in how to correctly measure the construct. Researchers have made use of a variety of measurements, such as ratings of aggression or loneliness, rankings of peer sociometric status, and role-playing (Crick & Dodge, 1994). Despite the differences in method, each emphasizes the importance of peer relationships in measuring a child's social functioning. While each method has its strengths, all fail to capture the complexity of social maladjustment. A child who has social problems may range from one who acts out to one who does not know how to make friends to one who gets teased often. Each child is having trouble in the social realm, but looks very different. Furthermore, there seems a need to distinguish between merely peer relationships and overall adjustment in the social realm. Thus, this study will address these weaknesses by using a multidimensional and multi-reporter approach to a child's social functioning. Namely, this construct of social maladjustment will be measured through parent report of child social problems, aggression, and withdrawal, as well as child report of their own social maladjustment.

As introduced above, this area of adjustment has become central in the understanding of child development, as children's relationships with their peers are especially important to overall long-term adjustment (Gifford-Smith & Rabiner, 2004; Parker & Asher, 1987). According to a meta-analysis done by Parker and Asher (1987), poor social adjustment in childhood is related not only to criminality and school truancy, but also more severe psychopathology, such as schizophrenia. Thus, quality peer relationships and peer acceptance are related to positive adjustment in children, whilst school-age social difficulties and peer rejection are associated with negative outcomes.

While the effects of social maladjustment in late childhood and early adolescence appear to be well described in the literature, little research has focused on ethnic or cultural variations in peer relations (Ladd, 1999). In a study of elementary school children, African American participants had more friendships than European-American children, which was attributed to the larger social networks seen in African American families and communities (Kovacs, Parker, & Hoffman, 1996). Additionally, evidence suggests that certain neighborhood or parental factors may impact social relationships for ethnic minorities. For example, African-Americans who live in low-income, inner-city neighborhoods may be exposed to community violence and more negative peer influences, which may lead to less positive social interactions (Mason, Cauce, Gonzales, & Hiraga, 1996). However, for the most part, these findings are still limited and further work needs to be done in exploring the social adjustment in this population.

Emotion Regulation/Dysregulation

Emotion regulation is a complex construct that is defined as the “extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional

reactions, especially their intensive and temporal features, to accomplish one's goals" (Thompson, 1994, p. 27-28). It encompasses both positive and negative emotions, such as joy, pleasure, distress, anger, and fear (Kopp, 1989). Regulatory skills involve adjusting emotions in response to other's mood levels, maintaining appropriate levels of mood, and normalizing mood after intense emotional arousal (Kelly, Schwartz, Gorman, & Nakamoto, 2008). Thus, emotion dysregulation is the term used for difficulties in this area.

However, the conceptualization of emotion regulation remains rather imprecise in the literature. While some researchers have focused on how emotions regulate psychological processes (e.g., coping), others have characterized emotion regulation as a skill in and of itself. Additionally, some conceptualize emotion regulation as a permanent characteristic within an individual, while others see it as variable and easily influenced by both outside influences or inner processes (Cole, Martin, & Dennis, 2004). Confusion exists in whether emotion regulation refers to positive versus negative emotions, the intensity of emotions, or the changes in emotion over time. In this way it seems understandable that the methods to measure the construct of emotion regulation have ranged from questionnaires to observational methods. Due to the disparities in the literature, it is necessary at this point to define how this study classified the variable of emotion regulation. Using the definition put forth by Thompson (1994), we defined emotion dysregulation as changes in emotions—specifically, the variability or lability of emotions.

Emotion Dysregulation and Adjustment

Because of the large role that emotions play in everyday life, it is expected that the regulation of emotions is necessary for appropriate adjustment throughout childhood. In fact, appropriate emotion regulation has been well established in the literature as necessary for mental health and adjustment throughout the lifespan (Southam-Gerow & Kendall, 2002). Incompetencies in emotion regulation have been linked to social difficulties, behavior problems, and internalizing disorders (Eisenberg et al., 2001; Katz, Hessler, & Annett, 2007). For example, adolescents, who report more intensity and lability in their emotions, such as sadness and anger, have greater negative outcomes, such as depression and behavior problems (Larson, Raffaelli, Richards, Ham, & Jewell, 1990; Silk, Steinberg, & Morris, 2003). These relationships can be understood in many ways. For example, children who feel sad and are unable to normalize their mood may develop depressive symptoms. Alternatively, children who cannot appraise their own emotional states may not be able to respond emotionally to interactions, and instead react physically, as with aggression (van der Kolk et al., 2005).

Emotion dysregulation is the term used to describe these impairments in emotion regulation and is broadly conceptualized as poorly modulated emotional responses. This may include displaying positive and negative moods inappropriately, failing to adjust emotions to other's mood levels, showing inappropriate levels of mood (too high or too low), and not being able to recover quickly from negative moods (Kelly et al., 2008). Hence, emotion dysregulation is regulation that is "operating in a dysfunctional manner" (Cole, Michel, & Teti, 1994, p. 80). Children who are emotionally dysregulated are

unable to replace their maladaptive response with adaptive ones, resulting in detrimental effects on their social and emotional development.

Emotion Dysregulation and Social Maladjustment

Children's social adjustment is closely related to emotions and their emotional competence, such as their emotion regulation abilities (Hubbard & Coie, 1994). In order to appropriately interact with someone, we must not only interpret their emotions, but also ensure that our own emotions are expressed appropriately. It is not surprising that pleasant emotions are shown to elicit favorable responses in others, while negative emotions tend to drive people away (Argyle & Lu, 1990; Furr & Funder, 1998). Moreover, research has shown that intense, moody, or emotionally negative children are less popular with peers (Stocker & Dunn, 1990) and high emotional intensity is associated with low level of socially appropriate behavior and low sociometric status (Eisenberg et al., 1993). In this way, the regulation of one's emotion is essential for a child's social adjustment. When a child regulates their emotion, it is a social task, choosing how to control emotions based on their social context. For example, a child who is feeling angry or anxious would want, and would need to be able, to change their mood if they were going to meet a new classmate

Children who have constructive ways of managing negative affect are more socially effective with peers and face less rejection, while children who are unable to manage their emotional arousal may engage in socially inappropriate behaviors that then reduce peer acceptance (Eisenberg, Fabes, Guthrie, & Reiser, 2000). As follows, children who are adept at emotion regulation are seen as more socially competent, more interpersonally sensitive, and have fewer issues with adjustment overall (Katz, Hessler, &

Annest, 2007). Emotion regulation is essential for social relationship because it influences an individual's emotional expression and behavior directly, thus affecting one's every interaction (Lopes, Salovey, Cote, & Beers, 2005).

In addition to social adjustment, research suggests that emotion regulation may serve as a protective factor for children exposed to multiple stressors (e.g., Buckner, Mezzacappa, & Beardslee, 2003; Kliewer et al., 2004; Silk, Shaw, Forbes, Lane, & Kovacs, 2006). Protective factors, such as intelligence (McCord & Ensimer, 1997) or family functioning (Gorman-Smith, Henry, & Tolan, 2004), enable children who face high numbers of stress and violence in their everyday lives to overcome these risks and become resilient. Emotion regulation may be such a factor because children are able to manage their negative affect or replace maladaptive responses with adaptive ones. For example, Buckner et al. (2003) found that children aged 8 to 17 who were classified as "resilient" had better emotion regulatory abilities than children who were less resilient. Additionally, in a study of African American youth exposed to violence and their families, emotion regulation skill of the child was found to be a protective factor, along with the caregiver's emotion regulation skill and caregiver-child interaction (Kliewer et al., 2009). Finally, among females only, Luthar, Cicchetti, and Becker (2000) found that appropriate emotion regulation serves as a protective stabilizing effect, which is one that results in sustaining competence despite increasing risk.

Adolescence and Emotion Dysregulation

As adolescence is a time of great change in both social and emotional development, it seems the impact of emotion dysregulation on social adjustment would be especially important to study at this time. For example, adolescents demonstrate

greater instability in their affect and report experiencing less positive emotions and more negative emotions (Larson, Moneta, Richards, & Wilson, 2002). While it appears that this instability in daily affective experience generally levels off in later adolescence (Larson et al., 2002), this may not be true for individuals who experience a great amount of stress in their daily life. Negative daily events and daily stress has been associated with an increase in reports of negative affective states among adolescents (Larson et. al, 2002).

Exposure to Violence and Emotion Regulation

Thus, because of its relation to resilience, emotion regulation is an important factor to study in the context of children exposed to community violence. Since violence exposure in low-income African American communities has been linked to child's maladjustment in many areas (see review above), it is essential to understand if emotion regulation may play a role. Specifically, for appropriate interventions, researchers need to understand if violence exposure impacts a child's emotion regulation abilities and what effect this has on their resiliency.

Research has focused closely on the development of pervasive stress reactions in youth who are multiply exposed to violent events. In fact, some suggest that such reactions may present as post-traumatic stress and include interacting disturbances in several areas of development, including emotional, cognitive, behavioral and psychobiological (Margolin & Vickerman, 2007). Although each domain is certainly important, it has been proposed that emotion regulation, as it encompasses interpretations and reactions to the environment, is the primary developmental task that then affects the other areas of functioning (Thompson, 1990). Examples of the implications of emotion

dysregulation include deficits in concentration, relationships, and impulse control (Armswroth & Holaday, 1993; van der Kolk, 2005).

Additionally, compelling evidence exists indicating that children who have experienced trauma in the form of abuse and neglect, display emotional deficits often seen in PTSD. While adults with PTSD are characterized by their emotional intrusions, feelings of numbness, or limited affective responses, research studies of maltreated children have shown fluctuations between hyperactivated emotional responses and restricted, flat affect (Cicchetti & Toth, 1995). Violence-exposed children are also described as having narrow and inflexible responses to emotionally arousing situations, as well as increased fear and anxiety (Randolph et. al, 1996). Furthermore, others have linked the intense feelings of anger or sadness and difficulties with emotional arousal observed in violence-exposed children to emotion dysregulation (Osofsky, 1995).

When specifically considering the impact of community violence, research with low-income urban African American adolescents, has found that trauma of this type exposure has profound effects on their affective states. Ortiz and colleagues (2008) found that greater report of post-traumatic stress (PTS) symptoms, such as numbing, avoidance, dissociation, intrusion, and hyperarousal, predicted higher levels of negative daily affect. Moreover, youth with high PTS-symptom scores reported more variability in their moods (Ortiz et al, 2008). Similarly, Sweeney, Goldner, & Richards (2011) examined the relationship between exposure to violence and daily feeling states (contented, hostile, anxious, and dysphoric) both cross-sectionally and longitudinally. In their analyses, they found that violence exposure was significantly related to higher levels of negative emotions (hostile and dysphoric) and greater variability in all emotions in the

seventh grade. Moreover, in eighth grade, exposure to violence was related to the negative feeling state subscales: hostile, anxious, and dysphoric, as well as more variability in all four subscales. However, there were no significant relations for sixth grade students. When they looked at the relationships between violence exposure and emotions longitudinally, Sweeney and colleagues found that although exposure to violence did not predict feeling states or variability, certain feeling states were important in predicting violence exposure (2011). Thus, from this review, it appears that violence exposed children may display increased negative/decreased positive feeling states and have difficulty in handling the full range of emotions, with both negative emotions and variability most affected.

Consequences of affect dysregulation, including both the detachment and excessive reactivity, consist of difficulty containing emotions, displays of inappropriate affect, and withdrawal from affect arousing situations, all of which increase the risk of poor impulse control and relationship problems (Cicchetti & Toth, 1995; van der Kolk, 2005). Thus, it seems plausible that children who are exposed to violence have adjustment difficulties because of deficits in their emotion regulation. It also seems that certain emotional states may be affected from violence exposure, namely dysphoria, anger, anxiety, and happiness, thus these are the emotional states that will be examined in this study. In conclusion, the trauma from exposure to violence causes children to have difficulties in controlling their emotions, which, in turn, impacts their social adjustment. However, this model has not been clearly established.

The Current Study

According to Buckner, Beardslee, and Bassuk (2005), research on possible mediators of community violence exposure to mental health is necessary in the development of theory and in setting the stage for more refined empirical research. In order for such a relationship to exist, two conditions need to be met. First, the variable must be affected by exposure to violence. Second, this hypothesized mediator variable must be able to influence mental health (Buckner, Beardslee, and Bassuk, 2005). Finally, the relationships must be examined over time in order to determine causality.

A small number of studies have looked at the mediating role of emotion regulation or dysregulation in the relationship between exposure to community violence and social adjustment. Overall, the results suggest that violent victimization is associated with negative social outcomes through the mediation of emotion dysregulation. Schwartz & Proctor (2000) was the first study to examine the relationship. Using a cross-sectional design of a sample of mostly (64%) Hispanic and poor (44%) children (4th-6th grade), the authors found that exposure to community violence by direct victimization was significantly associated with negative social outcomes, including aggression, bullying by peers, and peer rejection. This relationship was mediated through emotion regulation, as reported by teachers. However, this relationship was not significant for witnessed violence. Kelly, Schwartz, Gorman, and Nakamoto (2008) built upon this study by assessing the relationship between community violence victimization and peer rejection longitudinally over 2 years. In their sample of youth (M age = 9.02 years; 36% Hispanic, 26% White/Caucasian, 23% other), violent victimization was associated with peer rejection and this relationship was explained through the mechanism of poor emotion

regulation skills. Moreover, the authors found that violent victimization and peer rejection were reciprocally related over time, with peer rejection in the first year resulting in greater violence victimization in the community in the second year. Witnessing violence was not significantly related.

Together, these two studies provide compelling evidence for the idea that the relationship between community violence exposure and social maladjustment may be explained by emotion dysregulation. However, there are several limitations to these studies. First, they have failed to look at other variables that may influence outcomes, such as gender. Second, they relied heavily on the use of questionnaires. Second, the participants are mainly limited to Latino and European American children, rather than African American youth, who are more at risk for being exposed to community violence than any other population in the United States (Gladstein, 1992; Stein, Jaycox, Kataoka, Rhodes, & Vestal, 2003). Finally, they have relied heavily on the use of questionnaires for a global measure of emotion regulation. Using the Experience Sampling Method (ESM) in this study will allow for an “in vivo” measure of a child’s emotion regulation which enables measurement of “dynamic within-person patterns, emotional behavior as it occurs, and people as they live their lives” (Tugde & Frederickson, 2007). Specifically, variability (through standard deviations) of feeling states will be used to examine the complexities of child emotion regulation. Thus, this study attempted to address the above mentioned gaps in previous literature.

Hypotheses

Question 1 and hypotheses. How does exposure to community violence affect the psychosocial trajectories of inner-city African American youth? Specifically, is

exposure to community violence related to difficulties in social adjustment and emotion regulation?

It is expected that high levels of exposure to community violence, both victimization and witnessing, will be related to higher reports of social maladjustment. It is also expected that both types of exposure to violence will be related to greater emotion dysregulation. We expect these relations to hold both cross-sectionally and longitudinally.

Question 2 and hypotheses. Is the relationship between exposure to violence and child social adjustment mediated by emotion regulation? This relationship will be examined for both witnessing community violence and victimization by community violence.

The longitudinal design of this study will allow us to study the significance of the mediational pathways and rule out other possible directional relationships. As stated above, it is predicted that children with more exposure to violence, through both witnessing and victimization, will experience greater emotion dysregulation. These children, in turn, will indicate greater social maladjustment (Figure 1).

Question 3 and hypotheses. Is there a self-perpetuating cycle or transactional relationship between community violence exposure and child social adjustment, such that community violence exposure leads to maladjustment, which in turn leads to more exposure to violence?

By collecting data on children longitudinally, we will be able to examine how these variables interact transactionally and determine whether they lead to a greater risk of exposure to violence (Figure 2).

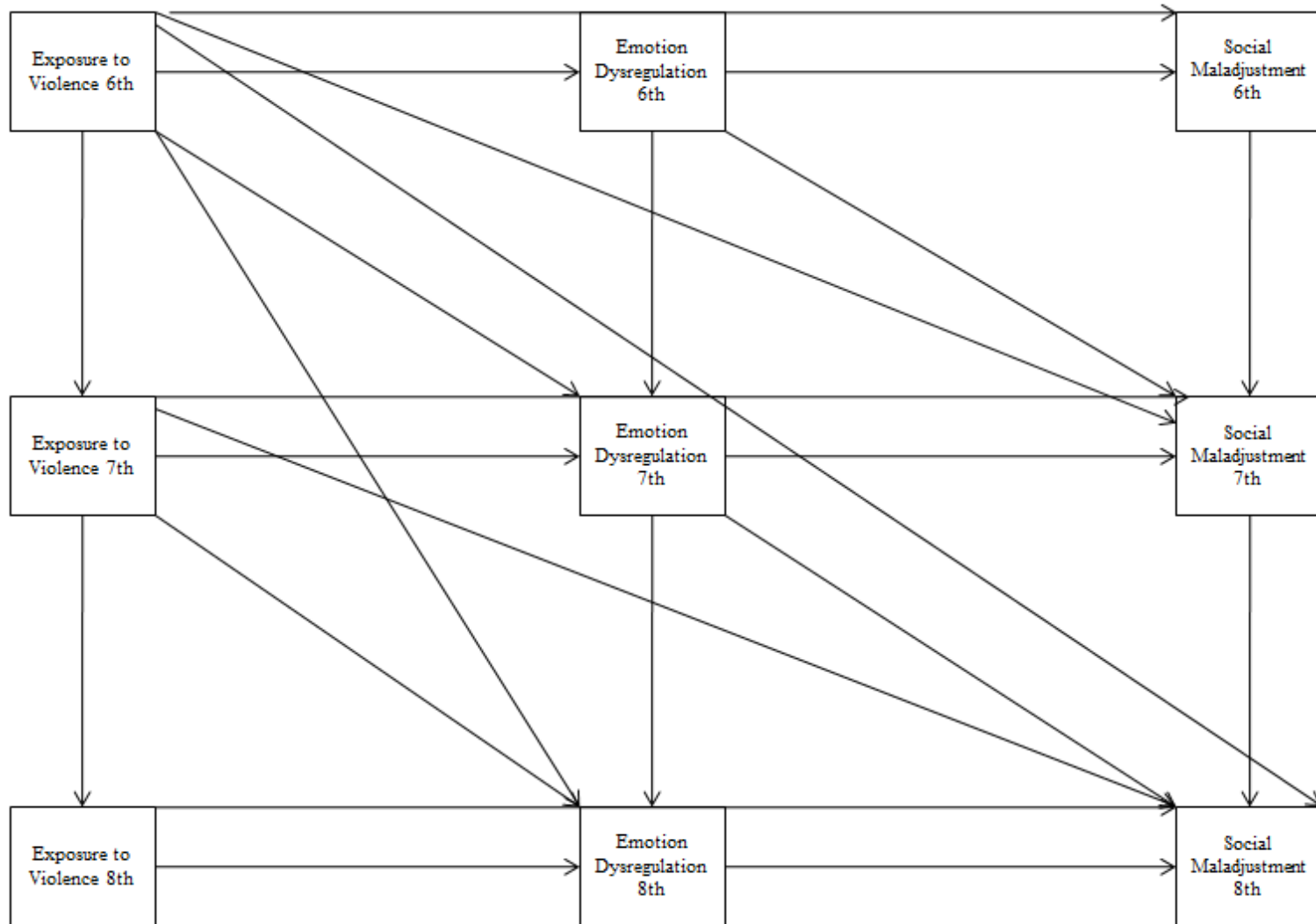


Figure 1. Hypothesized mediational model.

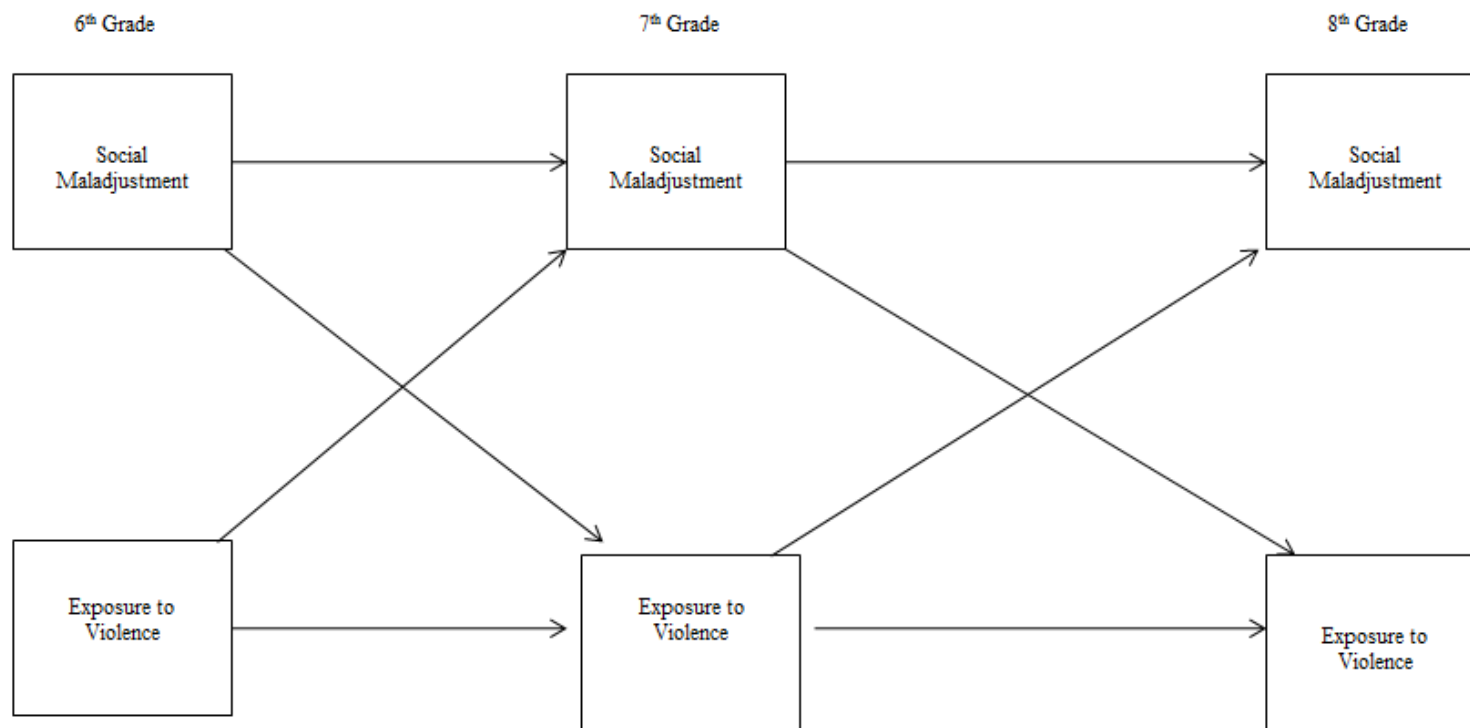


Figure 2. Hypothesized transactional model.

CHAPTER THREE

METHOD

Participants

The data were collected from six inner city Chicago public schools in high crime neighborhoods, as determined by Chicago Police Department statistics derived in the year before the study's inception. A sample of 268 African American students (*M* age = 11.65 years, 40% males and 60% females) were drawn to participated in the study. Children's exposure to violence was assessed longitudinally over three years, from sixth-grade to eighth, during the school years of 1999-2000 to 2001-2002. Two hundred fifty-four seventh graders (*M* age = 12.57 years, 41% males and 59% females) participated in the second year of the study and 222 eighth graders (*M* age = 13.58 years, 41% males and 59% females) participated in the third year. Data collection began during the 1999-2000 school year.

Most of the participants came from lower-income households. A previous study of this sample reported median family income in the participants' households was between \$10,000 and \$20,000 according to parents or guardians. Additionally, 69% of participants came from households headed by single mothers and 31% of participants' parents were unemployed (Ortiz et al., 2008).

Procedure

Of the students asked to take part in the study, 58% agreed to participate. In order to be involved in the study each child had to return both a child assent form and a parent/guardian consent form. Students were informed at the outset of games, gift certificates or sports equipment they would receive as a reward for participation. Data collection began when the students were in 6th grade (Time 1), and again when the students were in 7th grade (Time 2) and 8th grade (Time 3).

Data were collected longitudinally for one week each year over three years on students' emotional states using the Experience Sampling Method (ESM). Prior to data collection, the researchers held a 40-minute training session instructing participants how to properly complete the self-report ESM forms. During the week of data collection, participants carried programmable watches and small notebooks with them. They received random signals approximately every 90 minutes when they were not in school and twice during school hours. At each random signal point, participants were asked to record where they were, what they were doing, who they were with, and what they were thinking and feeling at that moment. Research staff members went to the school each day to answer questions and ensure that participants complied with ESM standards.

Students received 51 signals over the course of the week, 37 times during the week and 14 times on the weekend. If the students responded to fewer than 15 of these signals, they were not included in the analysis. The median response total was 42 or 82% of the total. This rate conforms to established satisfactory levels of ESM responding (see Larson, 1989).

During the week of data collection, a series of additional questionnaires were administered to students in small groups at the school. The students were also sent home with a packet of forms to parents complete. These same procedures with the same participants were used for all 3 years of data collection.

Measures

Demographic

Information on the following demographic variables was assessed: gender, parent and child age, parent and child race/ethnicity, SES (as assessed by family income), parent education attainment, parent occupation, number of people in home, and religious affiliation.

Exposure to Violence

Each participant completed a self-report questionnaire based on the “My Exposure to Violence Interview,” (Buka, Selner-O’Hagan, Kindlon, & Earls, 1997). The adolescents indicated how frequently they had been exposed to violence in the past year, both as a witness and as a victim, on a 5- point scale from “never” to “four or more times.” Using the perpetrator as a reference, a community violence exposure scale was derived for witnessing and victimization. Perpetrators for the community violence scale were individuals such as strangers, people in the neighborhood, drug dealers and gang members. Family member perpetrators were not included in the community violence scale. The witnessing subscale was composed of 13 items such as “Have you seen someone get stabbed with a knife?” or “Have you seen someone else get chased by someone who wanted to hurt them?” The summed response of these items was employed to represent Witnessing Violence. The Victimization by Violence subscale was derived

from 12 items such as “Have you been mugged/stuck up?” and “Have you been hit, kicked, or beat up by someone?” The summed response to these items was taken to be the level of victimization.

The EV-Witness subscale demonstrates adequate internal consistency for years one ($\alpha = .71$), two ($\alpha = .74$), and three ($\alpha = .75$). The EV-Victim subscale demonstrated adequate to low internal consistency for years one ($\alpha = .71$), two ($\alpha = .50$), and three ($\alpha = .59$).

Emotion Regulation

In order to build on past research, ESM responses from the child allowed for an “in vivo” measure of emotion regulation. Specifically, variability (through standard deviations) of feeling states was used to examine emotion regulation. Each emotion the child reports was rated on either unipolar (4-point response range) or bipolar (7-point response range) scales. Using ESM for emotion regulation enables measurement of “dynamic within-person patterns, emotional behavior as it occurs, and people as they live their lives” (Tugde & Frederickson, 2007). For this study, the feeling states of dysphoria (sad, unfriendly, disrespected), hostility (yelling, angry, hitting), and anxious (scared, worried, disappointed, nervous), were formed from the individual reports of feelings. In their study, Sweeney and colleagues (2011) found Cronbach’s alphas for these four subscales at Time 1, Time 2, and Time 3 to be: Dysphoric (.57, .65, .77), Hostile (.91, .91, .95), and Anxious (.72, .71, .76),

Because the three emotion dysregulation scales were found to be highly correlated with each other ($r > .50$), they were combined into a composite emotion dysregulation scale for ease of analysis.

Social Maladjustment

Both child report of their own social maladjustment and parent report of social maladjustment were used, as to enhance understanding of this construct from multiple reporters.

Child report. Social maladjustment was measured by combining items from Social Support Scale (adapted from Dubow & Ullman, 1989) and the Child Depression Inventory (Kovacs, 1985). Items from the Social Support Scale included 4 questions (“Do your friends make fun of you; Do your friends like to hear your ideas; Can you count on your friends for help or advice when you have problems; Do your friends make you feel bad”) that captured the child’s feeling of support from peers. Three questions from the Child Depression Inventory were included (I don’t like being with other people; I feel alone all the time; I do not have any friends). Appropriate items on both scales were reverse scored, such that higher scores represent more social maladjustment. Because these questionnaires are on different scales, the items were combined by using Z-scores to create a total “Child Maladjustment Scale” ($\alpha = .59$).

Parent report. Social maladjustment was measured yearly using a combination of items from the Child Behavior Checklist (CBCL; Achenbach, 1991) Social Problems, Withdrawn, and Aggressive Behavior Subscales. These three subscales will allow for a comprehensive approach to a child’s social adjustment.

The CBCL Social problems Subscale includes 8 items, such as “Doesn’t get along with other kids” and “Gets teased a lot.” The Withdrawn subscale includes 9 items, such as “Withdrawn, doesn’t get involved with others” and “Would rather be alone than with others.” The Aggressive Behavior subscale includes 19 items, such as “Argues a lot” and

“Gets in many fights.” One of the parents/guardians rated their children’s behaviors for these items on a 3-point-scale (0 to 2) of *not true*, *sometimes true*, and *very/often true*.

The three subscales together demonstrate good internal consistency over all three years, as measured by Cronbach’s alpha (.91, .92, .90) and no item-total correlations less than .30.

CHAPTER FOUR

RESULTS

Descriptive Analyses

The means and standard deviations for reports of exposure to violence (witnessing and victimization), emotion dysregulation, and both parent and child report of social maladjustment at all three assessment points were examined. These numbers, along with the correlations among the variables are presented in Table 1.

Exposure to Violence, Emotion Dysregulation, and Social Maladjustment

To explore the relationship between the variables of exposure to violence, emotion dysregulation, and social maladjustment, structural equation modeling (SEM) was employed. Specifically, LISREL 8.80 (Joreskog & Sorbom, 1996) was used to test two different path models. These path models allowed us to examine the direct effects of exposure to violence to social maladjustment (Question 1), as well as the mediating role (cross-sectional and longitudinal) of emotion dysregulation in the relation between exposure to violence and social maladjustment (Question 2). SEM is preferred over regressions for testing mediational models because it is more likely to detect mediation if it exists and also allows for simultaneous estimation (Iacobucci, Saldanha, & Deng, 2007).

In the first path model, exposure to violence at 6th, 7th, and 8th grade was allowed to predict social maladjustment at 6th, 7th, and 8th grade, as well as emotion

Table 1. Correlations, Means, and Standard Deviations.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Gender																
2. Witnessing 6th	-.04															
3. Witnessing 7th	.08	.12*														
4. Witnessing 8th	.09	.21**	.36**													
5. Victimization 6th	-.06	.60**	-.05	-.03												
6. Victimization 7th	.08	-.04	.62**	.22**	-.03											
7. Victimization 8th	.06	.25**	.27**	.61**	.00	.37**										
8. Emotion Dysregulation 6th	.12	.10	.07	.05	.13*	.08	.15**									
9. Emotion Dysregulation 7th	.06	.06	.20**	.08	.04	.09	.06	.57**								
10. Emotion Dysregulation 8th	.05	.11	.23**	.24**	.13*	.17**	.19**	.42**	.52**							
11. Child Report Social Maladjustment 6th	.21**	.03	.02	.02	-.04	-.03	-.07	.09	.08	.13*						
12. Child Report Social Maladjustment 7th	.17**	.00	-.06	-.06	-.01	-.08	-.19**	.02	-.07	.01	.29**					
13. Child Report Social Maladjustment 8th	.29**	-.01	-.13*	-.13*	-.10	-.24**	-.08	.12*	.04	-.12*	.20**	.31**				
14. Parent Report Social Maladjustment 6th	.04	.13**	-.07	-.03	.08	-.10	-.07	.20**	.15**	-.03	-.07	.07	.13*			
15. Parent Report Social Maladjustment 7th	.04	.16**	-.04	.08	.08	-.19*	.19**	.28**	.28**	.19*	.06	-.03	.12*	.80**		
16. Parent Report Social Maladjustment 8th	.05	.10	-.13*	.05	.08	-.17**	-.03	.24**	.06	.13*	.00	.00	.11*	.79*	.73**	
Mean	1.63	3.34	2.56	2.80	1.50	1.06	.86	.50	.41	.39	.002	-.005	-.004	.27	.26	.26
SD	.48	4.09	3.73	3.57	2.95	2.22	1.78	.30	.28	.29	.39	.40	.36	.22	.21	.19

dysregulation at 6th, 7th, and 8th grade. Emotion dysregulation at 6th, 7th, and 8th grade, however, was not allowed to predict social maladjustment at 6th, 7th, and 8th grade. This model allowed for examination of the total effects of exposure to violence on emotion dysregulation and social maladjustment without considering mediation and corresponds to the testing of the relation between the independent variable and the outcome and the independent variable and the mediator in traditional mediation testing (Baron & Kenny, 1986).

In a second path model, mediation was examined. Exposure to violence at 6th grade was allowed to predict emotion dysregulation at 6th, 7th, and 8th grade as well as social maladjustment at 6th, 7th, and 8th grade. Furthermore, emotion dysregulation at 6th, 7th, and 8th grade was allowed to predict social maladjustment at 6th, 7th, and 8th grade. This model allowed for a direct test of the mediational effect and corresponds to the testing of the relation between the mediator and the dependent variable and the relation between the independent variable and dependent variable when controlling for the initial relation between the independent variable and dependent variable in traditional mediation testing (Baron & Kenny, 1986). Furthermore, this technique allows for earlier levels of exposure to violence and emotion dysregulation to be controlled.

These two models were tested separately for witnessing violence and violent victimization, as well the outcome variables of child-report of social maladjustment and parent-report of social maladjustment, resulting in a total of eight models (4 with the direct effects and 4 testing mediation). Imputation of missing cases was completed using expectation maximization algorithm whereby missing cases were obtained through multiple imputations using available data. This method is preferred to mean replacement

because it allows variables to retain variance whereas mean imputation reduces it. In cases where more than 50% of the data was missing, LISREL required deletion of cases for the final analyses. Thus, the final number used in path models may differ slightly from those used to obtain descriptive statistics

Child Report of Social Maladjustment

Witnessing Violence

The first path model examined the direct effects of witnessing violence on child report of social maladjustment and emotion dysregulation (see Figure 3). Results from this path model indicated that witnessing violence at 6th grade was not significantly associated with child-report of social maladjustment in 6th grade, unstandardized path coefficient = .00, $SE = .01$, $p > .10$, in 7th grade, unstandardized path coefficient = .00, $SE = .01$, $p > .10$, or in 8th grade, unstandardized path coefficient = .00, $SE = .01$, $p > .10$. Witnessing violence in 7th grade was not significantly associated with social maladjustment at 7th grade, unstandardized path coefficient = .00, $SE = .01$, $p > .10$, but was significantly negatively associated in 8th grade, unstandardized path coefficient = -.03, $SE = .01$, $p < .01$. Finally, witnessing violence at 8th grade was not significantly associated with social maladjustment in 8th grade, unstandardized path coefficient = -.01, $SE = .01$, $p > .10$. These analyses suggest that witnessing violence was not related to child report of their social maladjustment, with the exception of witnessing violence in 7th grade predicting more social maladjustment in 8th grade, which was in opposite direction of what was hypothesized.

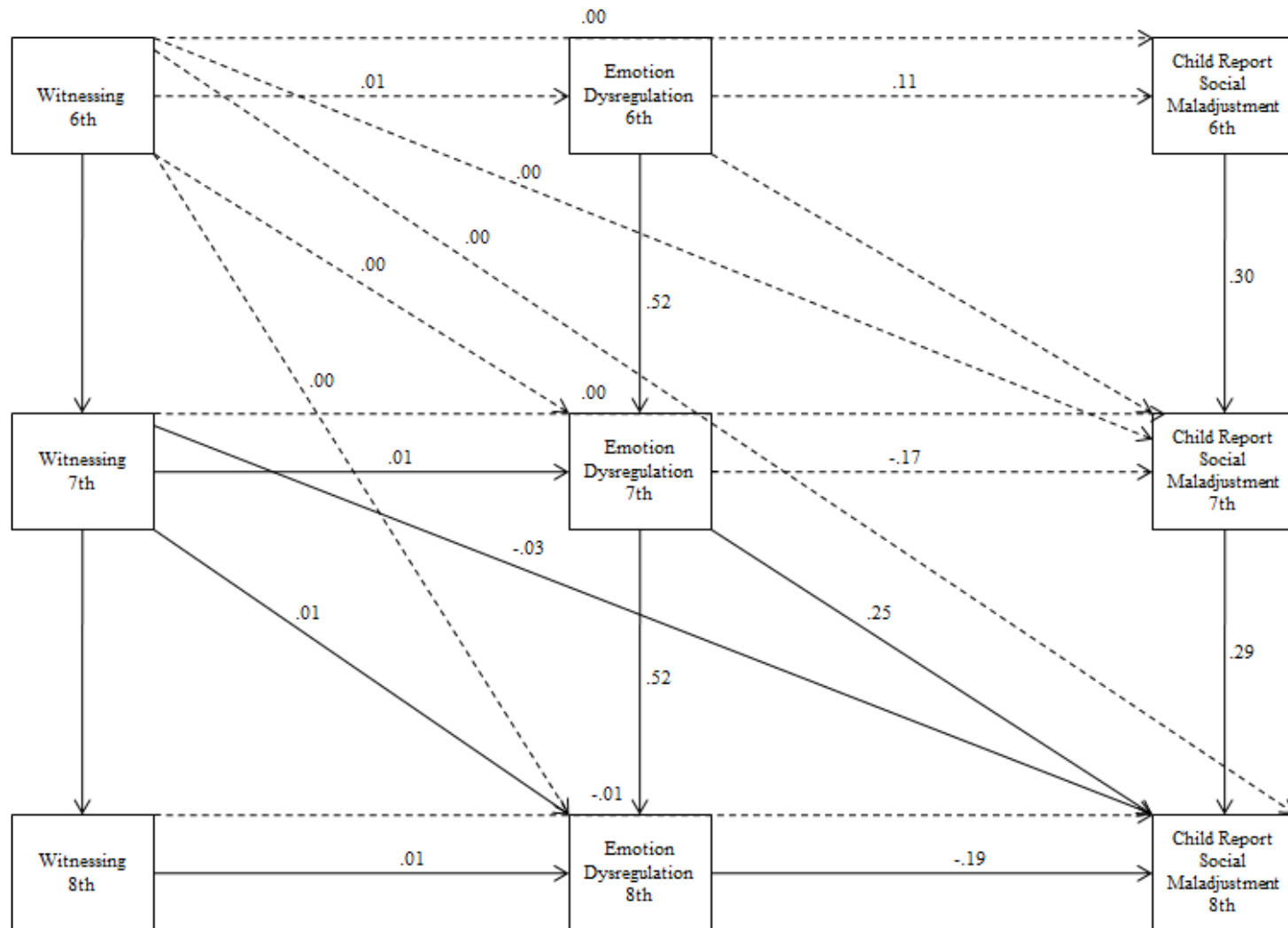


Figure 3. Exposure to violence (witnessing), emotion dysregulation, and child report of social maladjustment. Solid lines indicate significant ($p \leq .05$) relationships. Dashed lines indicate nonsignificant ($p \geq .05$) relationships.

Examining the relations between witness violence and emotion dysregulation, results indicated that witnessing violence at 6th grade was not significantly associated with emotion dysregulation at 6th grade, unstandardized path coefficient = .01, $SE = .00$, $p > .05$, at 7th grade, unstandardized path coefficient = .00, $SE = .00$, $p > .10$, or at 8th grade, unstandardized path coefficient = .00, $SE = .00$, $p > .10$. Witnessing violence at 7th grade was significantly positively associated with emotion dysregulation at 7th grade, unstandardized path coefficient = .01, $SE = .00$, $p < .01$, and 8th grade, unstandardized path coefficient = .01, $SE = .00$, $p < .01$. Finally, witnessing violence at 8th grade was significantly positively associated with emotion dysregulation at 8th grade, unstandardized path coefficient = .02, $SE = .00$, $p < .01$. In summary, witnessing violence in 6th grade did not affect a child's regulation of their emotions. However, witnessing violence in 7th and 8th grade was related to children's report of their emotional dysregulation in both 7th and 8th grade, both cross-sectionally and longitudinally.

Results from the second path model indicated that emotion dysregulation at 6th grade was not significantly associated with social maladjustment at 6th grade, unstandardized path coefficient = .11, $SE = .07$, $p > .10$, or at 7th grade, unstandardized path coefficient = .08, $SE = .09$, $p > .10$. Emotion dysregulation at 7th grade was not significantly associated with social maladjustment at 7th grade, unstandardized path coefficient = -.17, $SE = .10$, $p > .10$, but was significantly positively associated with social maladjustment in 8th grade, unstandardized path coefficient = .25, $SE = .08$, $p < .01$. Finally, emotion dysregulation at 8th grade was significantly negatively associated with social maladjustment at 8th grade, unstandardized path coefficient = -.19, $SE = .08$, $p < .01$. In summary, children with higher levels of emotion dysregulation in 7th grade

reported they were more socially maladjusted in 8th grade, but children with higher levels of emotion dysregulation in 8th grade reported they were less socially maladjusted in 8th grade.

To directly test for mediation, the hypothesized mediational model from the second path model was examined. This model indicated that when controlling for the influence of emotion dysregulation in 7th grade, was still a significant relationship between witnessing violence in 7th grade and social maladjustment in 8th grade, unstandardized path coefficient = $-.03$, $SE = .01$, $p < .01$. The unstandardized indirect effect of witnessing violence on social maladjustment, however, indicated that emotion dysregulation did partially mediate this effect, Sobel $Z = -3.00$, $p = .003$. Additionally, when controlling for the influence of emotion dysregulation in 8th grade, the relation between witnessing violence in 7th grade and child social maladjustment in 8th grade also in indirect effect of witnessing violence on social maladjustment also indicated a partial mediation (Sobel $Z = -2.38$, $p = .018$). These findings suggest that emotion dysregulation in 7th and 8th grade partially mediated the relation between witnessing violence in 7th grade and child-report of social maladjustment in 8th grade.

Victimization by Violence

Results from the first path model, examining direct effects, indicated that victimization by violence in 6th grade was not significantly associated with child-report of social maladjustment in 6th grade, unstandardized path coefficient = $-.01$, $SE = .01$, $p > .10$, or in 7th grade, unstandardized path coefficient = $.00$, $SE = .01$, $p > .10$. However, victimization by violence was significantly negatively associated in 8th grade, unstandardized path coefficient = $-.01$, $SE = .01$, $p < .05$ (see Figure 4). Victimization by

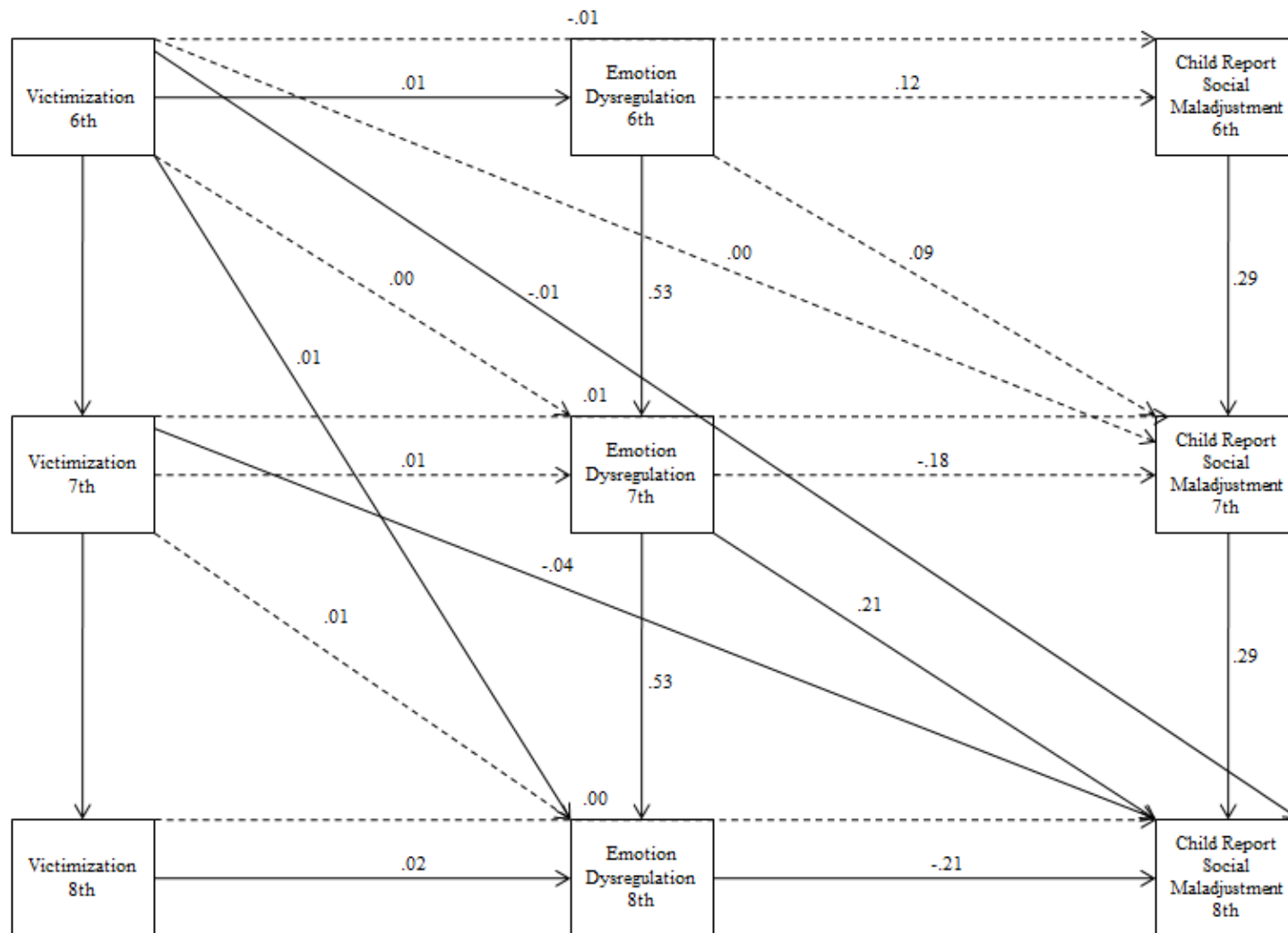


Figure 4. Exposure to violence (victimization), emotion dysregulation, and child report of social maladjustment. Solid lines indicate significant ($p \leq .05$) relationships. Dashed lines indicate nonsignificant ($p \geq .05$) relationships.

violence in 7th grade was not significantly associated with social maladjustment at 7th grade, unstandardized path coefficient = .01, $SE = .02$, $p > .10$, but was negatively associated with social maladjustment at 8th grade, unstandardized path coefficient = -.04, $SE = .01$, $p < .01$. Finally, victimization by violence in 8th grade was not significantly associated with social maladjustment in 8th grade, unstandardized path coefficient = .00, $SE = .01$, $p > .10$. In summary, violent victimization in 6th and 8th grade was significantly negatively associated with child social maladjustment in 8th grade, but no other relationships were significant. Thus, the hypotheses were not supported.

Additionally, victimization by violence in 6th grade was significantly positively associated with emotion dysregulation in 6th grade, unstandardized path coefficient = .01, $SE = .01$, $p < .01$, and in 8th grade, unstandardized path coefficient = .01, $SE = .01$, $p < .01$, but not at 7th grade, unstandardized path coefficient = .00, $SE = .01$, $p > .10$. Victimization violence in 7th grade was also not significantly associated with emotion dysregulation in 7th grade, unstandardized path coefficient = .01, $SE = .01$, $p > .05$, or 8th grade, unstandardized path coefficient = .01, $SE = .01$, $p > .05$. Finally, victimization by violence in 8th grade was significantly positively associated with emotion dysregulation in 8th grade, unstandardized path coefficient = .02 $SE = .01$, $p < .01$. These relationships demonstrate that experiencing more victimization is related to higher levels of emotional dysregulation cross-sectionally in 6th and 8th grade, as well as longitudinally from 6th grade to 8th grade.

Results from the second path model, examining the mediator to the dependent variable, indicated that emotion dysregulation in 6th grade was not significantly associated with social maladjustment in 6th grade, unstandardized path coefficient = .12,

$SE = .07, p > .10$, or in 7th grade, unstandardized path coefficient = .09, $SE = .09, p > .10$. Emotion dysregulation in 7th grade was not significantly associated with social maladjustment in 7th grade, unstandardized path coefficient = -.18, $SE = .10, p > .10$, but was significantly positively associated with social maladjustment in 8th grade, unstandardized path coefficient = .21, $SE = .08, p < .01$. Finally, emotion dysregulation in 8th grade was significantly negatively associated with social maladjustment in 8th grade, unstandardized path coefficient = -.21, $SE = .08, p < .01$. These results suggest that not only is victimization associated with social maladjustment, but that this effect operates at least partially through emotion dysregulation. However, because at least one significant relationship among the independent variable, mediator and dependent variable was missing from each model, mediation was not examined, except for the case of the longitudinal relations among violent victimization in 6th grade, emotion dysregulation in 8th grade, and maladjustment in 8th grade.

To directly test this mediation, the hypothesized mediational model from the second path model was examined. Longitudinally, when controlling for the influence of emotion dysregulation in 8th grade, the relation between violent victimization in 6th grade and child social maladjustment was no longer significant, unstandardized path coefficient = -.01, $SE = .01, p > .05$. However, results from the Sobel test revealed that this mediation was not significant (Sobel $Z = -.93, p = .35$).

Parent Report of Social Maladjustment

Witnessing Violence

As stated above, the two models were tested again using parent report of their child's social maladjustment as the outcome variable (see Figure 5). The first path model

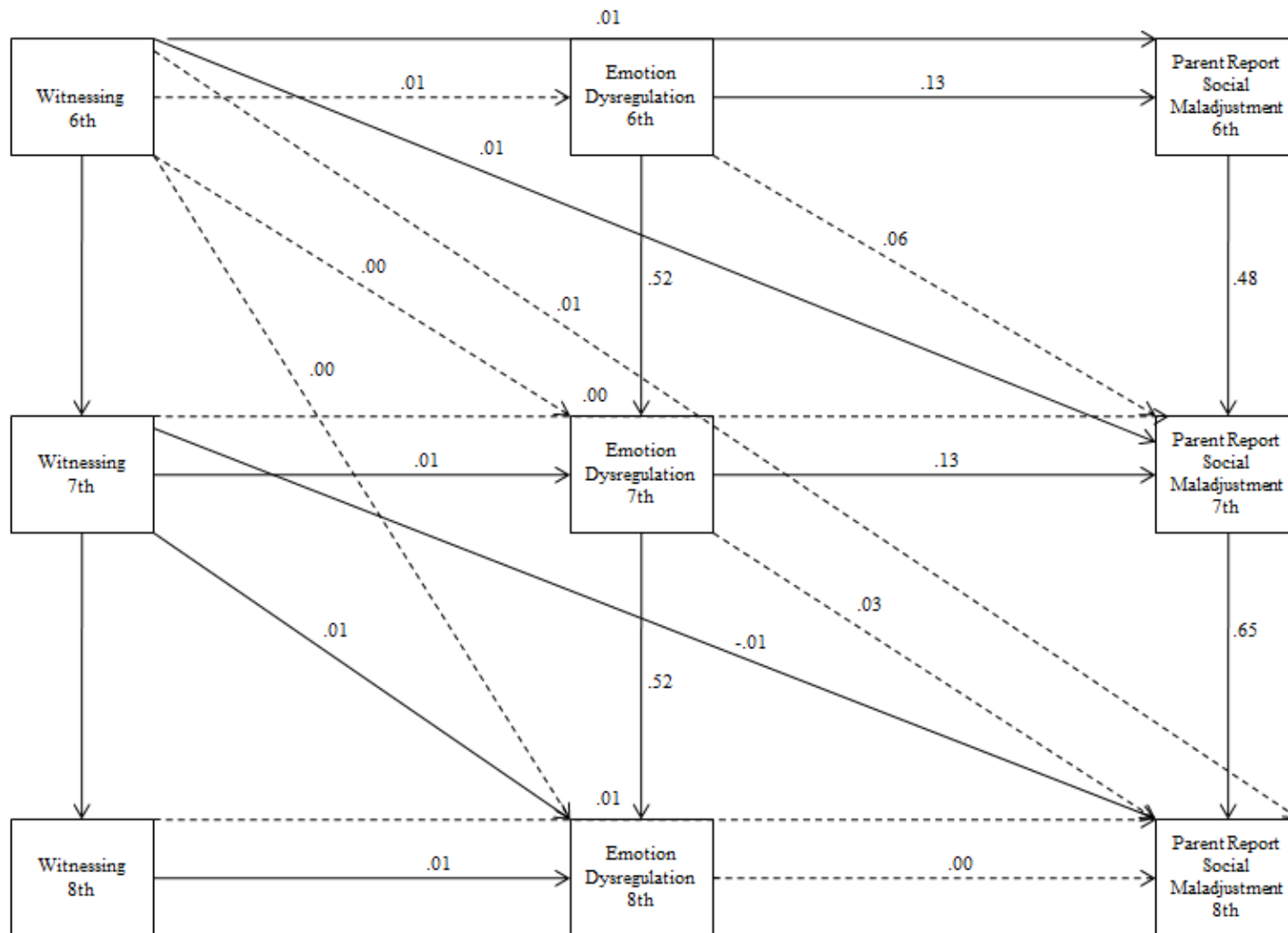


Figure 5. Exposure to violence (witnessing), emotion dysregulation, and parent report of social maladjustment. Solid lines indicate significant ($p \leq .05$) relationships. Dashed lines indicate nonsignificant ($p \geq .05$) relationships.

testing the direct effects indicated that witnessing violence in 6th grade was significantly positively associated with parent-report of social maladjustment in 6th grade, unstandardized path coefficient = .01, $SE = .00$, $p < .05$ and 7th grade, unstandardized path coefficient = .01, $SE = .00$, $p < .05$, but was not significantly associated in 8th grade, unstandardized path coefficient = .01, $SE = .00$, $p > .05$. Witnessing violence in 7th grade was not significantly associated with social maladjustment at 7th grade, unstandardized path coefficient = .00, $SE = .00$, $p > .10$, but was significantly negatively associated in 8th grade, unstandardized path coefficient = -.01, $SE = .00$, $p < .01$. Finally, witnessing violence in 8th grade was not significantly associated with social maladjustment in 8th grade, unstandardized path coefficient = .01, $SE = .00$, $p > .05$. To sum up, witnessing greater levels of violence in 6th grade was related to higher levels of child social maladjustment per parent report in 6th and 7th grade. In contrast to expectations, in 7th grade, witnessing more violence was related to lower levels of parent-reported social maladjustment.

Similar to the child report of social maladjustment model, the relationship between witnessing violence and emotion dysregulation was examined. Witnessing violence in 6th grade was not significantly associated with emotion dysregulation in 6th grade, unstandardized path coefficient = .01, $SE = .00$, $p > .05$, 7th grade, unstandardized path coefficient = .00, $SE = .00$, $p > .10$, or in 8th grade, unstandardized path coefficient = .00, $SE = .00$, $p > .10$. Witnessing violence in 7th grade was significantly positively associated with emotion dysregulation in 7th grade, unstandardized path coefficient = .01, $SE = .00$, $p < .01$, and in 8th grade, unstandardized path coefficient = .01, $SE = .00$, $p < .01$ and witnessing violence in 8th grade was significantly positively associated with

emotion dysregulation in 8th grade, unstandardized path coefficient = .01, $SE = .00$, $p < .01$. These results confirm the hypothesis that witnessing more violence was related to higher levels of emotion dysregulation both cross-sectionally and longitudinally for 7th grade, and cross-sectionally for 8th grade, but witnessing violence in 6th grade did not significantly affect emotion dysregulation.

Results from the second path model indicated that emotion dysregulation in 6th grade was significantly positively associated with social maladjustment in 6th grade, unstandardized path coefficient = .13, $SE = .04$, $p < .05$, but not in 7th grade, unstandardized path coefficient = .06, $SE = .04$, $p > .05$. Emotion dysregulation in 7th grade was significantly positively associated with social maladjustment in 7th grade, unstandardized path coefficient = .13, $SE = .04$, $p < .05$, but was not significantly associated in 8th grade, unstandardized path coefficient = .03, $SE = .03$, $p > .05$. Finally, emotion dysregulation in 8th grade was not significantly associated with social maladjustment in 8th grade, unstandardized path coefficient = .00, $SE = .03$, $p > .05$. In summary, more emotion dysregulation in 6th and 7th grade was related to more social maladjustment cross-sectionally, but this relationship was not true longitudinally or for 8th grade. Again, because at least one significant relationship among the independent variable, mediator and dependent variable was missing from each model, mediation was not examined (Baron & Kenny, 1986).

Victimization by Violence

The final two models tested the relationship between violent victimization and parent report of their child's social maladjustment (see Figure 6). Results from the first model, testing the direct effects, indicated that violent victimization in 6th grade was not

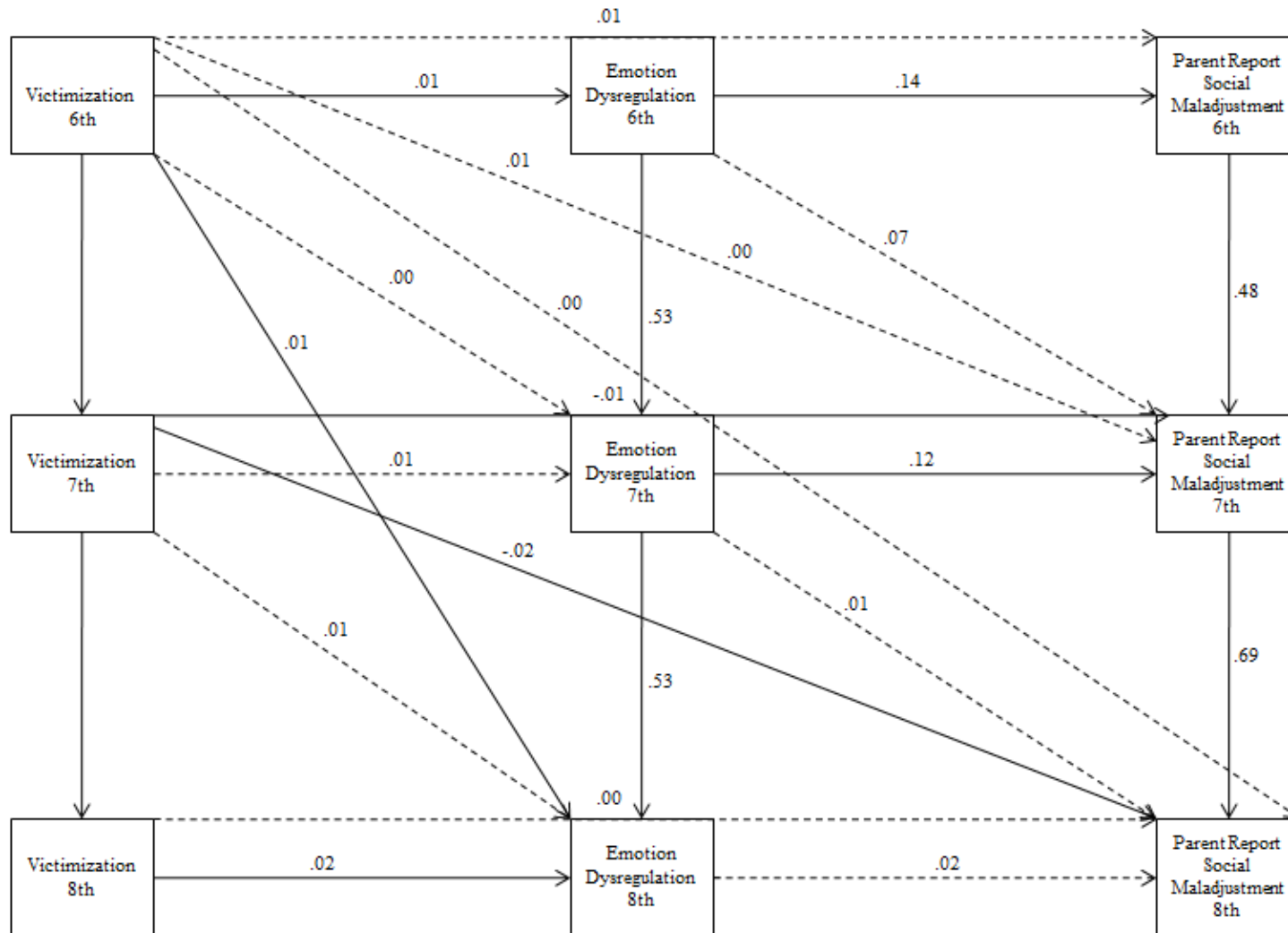


Figure 6. Exposure to violence (victimization), emotion dysregulation, and parent report of social maladjustment. Solid lines indicate significant ($p \leq .05$) relationships. Dashed lines indicate nonsignificant ($p \geq .05$) relationships.

significantly associated with parent-report of social maladjustment in 6th grade, unstandardized path coefficient = .01, $SE = .00$, $p > .05$, 7th grade, unstandardized path coefficient = .01, $SE = .00$, $p > .05$, or 8th grade, unstandardized path coefficient = .00, $SE = .00$, $p > .05$. Victimization in 7th grade was significantly negatively associated with social maladjustment in 7th grade, unstandardized path coefficient = -.01, $SE = .01$, $p < .01$ and in 8th grade, unstandardized path coefficient = -.02, $SE = .01$, $p > .05$. Finally, victimization in 8th grade was not significantly associated with social maladjustment in 8th grade, unstandardized path coefficient = .00, $SE = .01$, $p > .05$. Thus, in contrast to expectations, violent victimization was significantly negatively associated with parent report of child social maladjustment both cross-sectionally and longitudinally for 7th grade only.

Victimization in 6th grade was significantly positively associated with emotion dysregulation in 6th grade, unstandardized path coefficient = .01, $SE = .01$, $p < .01$, and 8th grade, unstandardized path coefficient = .01, $SE = .01$, $p < .01$, but not in 7th grade, unstandardized path coefficient = .00, $SE = .01$, $p > .05$. Victimization in 7th grade was not significantly associated with emotion dysregulation in 7th grade, unstandardized path coefficient = .01, $SE = .01$, $p > .05$, or in 8th grade, unstandardized path coefficient = .01, $SE = .01$, $p > .05$, but victimization in 8th grade was significantly positively associated with emotion dysregulation in 8th grade, unstandardized path coefficient = .02, $SE = .01$, $p < .05$. These relationships demonstrate that experiencing more victimization is related to higher levels of emotional dysregulation cross-sectionally in 6th and 8th grade, as well as longitudinally from 6th grade to 8th grade. However, victimization in 7th grade did not affect emotion dysregulation.

Results from the second path model indicated that emotion dysregulation in 6th grade was significantly positively associated with social maladjustment in 6th grade, unstandardized path coefficient = .14, $SE = .04$, $p < .01$, but was not significantly associated in 7th grade, unstandardized path coefficient = .07, $SE = .04$, $p > .05$. Emotion dysregulation in 7th grade was significantly positively associated with social maladjustment in 7th grade, unstandardized path coefficient = .12, $SE = .04$, $p < .05$, but was not significantly associated with social maladjustment in 8th grade, unstandardized path coefficient = .01, $SE = .03$, $p > .05$. Finally, emotion dysregulation in 8th grade was not significantly associated with social maladjustment in 8th grade, unstandardized path coefficient = .02, $SE = .03$, $p > .05$. In summary, higher levels emotion dysregulation was related to higher levels of parent-reported child social maladjustment cross-sectionally for 6th and 7th grade.

Because at least one significant relationship among the independent variable, mediator and dependent variable was missing from each model, mediation was not examined (Baron & Kenny, 1986). However, the two significant relationships between victimization and emotion dysregulation and emotion dysregulation and social maladjustment in 6th grade provide evidence for indirect influence of victimization on maladjustment through emotion dysregulation (Preacher & Hayes, 2008).

Transactional Relationship Between Maladjustment and Community Violence Exposure

In order to test the hypothesis that there is a transactional relationship between community violence exposure and social maladjustment (Question 3), LISREL 8.5

(Joreskog & Sorbom, 1996) was used to estimate a path model in which the relationships between exposure to violence and social maladjustment were examined.

Child Report of Social Maladjustment and Witnessing Violence

Examining the transactional relationships between social report of social maladjustment and witnessing violence revealed that social maladjustment in 6th grade was significantly positively related to witnessing violence in 7th grade, unstandardized path coefficient = 1.52, $SE = .55$, $p < .05$. However, social maladjustment in 7th grade was not significantly related to witnessing violence in 8th grade, unstandardized path coefficient = $-.47$, $SE = .49$, $p > .05$ (see Figure 7). Additionally, witnessing violence in 6th grade was not significantly related to social maladjustment in 7th grade, unstandardized path coefficient = $.00$, $SE = .01$, $p > .05$. However, witnessing violence in 7th grade was significantly negatively associated with social maladjustment in 8th grade, unstandardized path coefficient = $-.03$, $SE = .01$, $p < .01$. Thus, children who reported greater social maladjustment in 6th grade witnessed more violence in 7th grade, but this relationship was not true for 7th to 8th grade.

Child Report of Social Maladjustment and Victimization by Violence

Examining the transactional relationships reveals that child report of their social maladjustment in 6th grade was not significantly related to victimization in 7th grade, unstandardized path coefficient = $-.19$, $SE = .33$, $p > .05$. However, social maladjustment in 7th grade was significantly negatively related to victimization in 8th grade, unstandardized path coefficient = $-.73$, $SE = .24$, $p < .05$ (see Figure 8). Additionally, victimization in 6th grade was not significantly related to social maladjustment in 7th grade, unstandardized path coefficient = $-.02$, $SE = .04$, $p > .05$. However, victimization

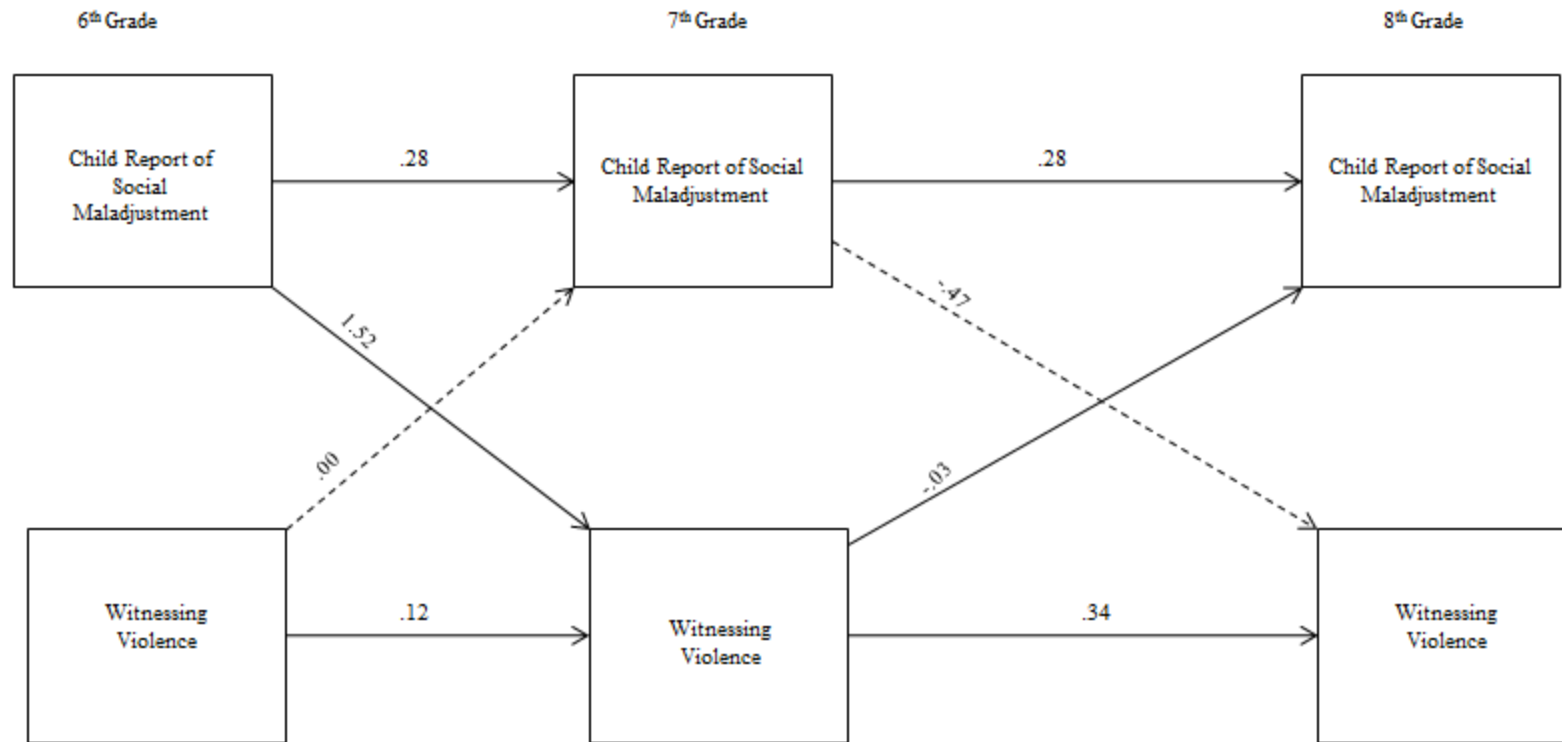


Figure 7. Transactional model: Child report of child social maladjustment and witnessing violence. Solid lines indicate significant ($p \leq .05$) relationships. Dashed lines indicate nonsignificant ($p \geq .05$) relationships.

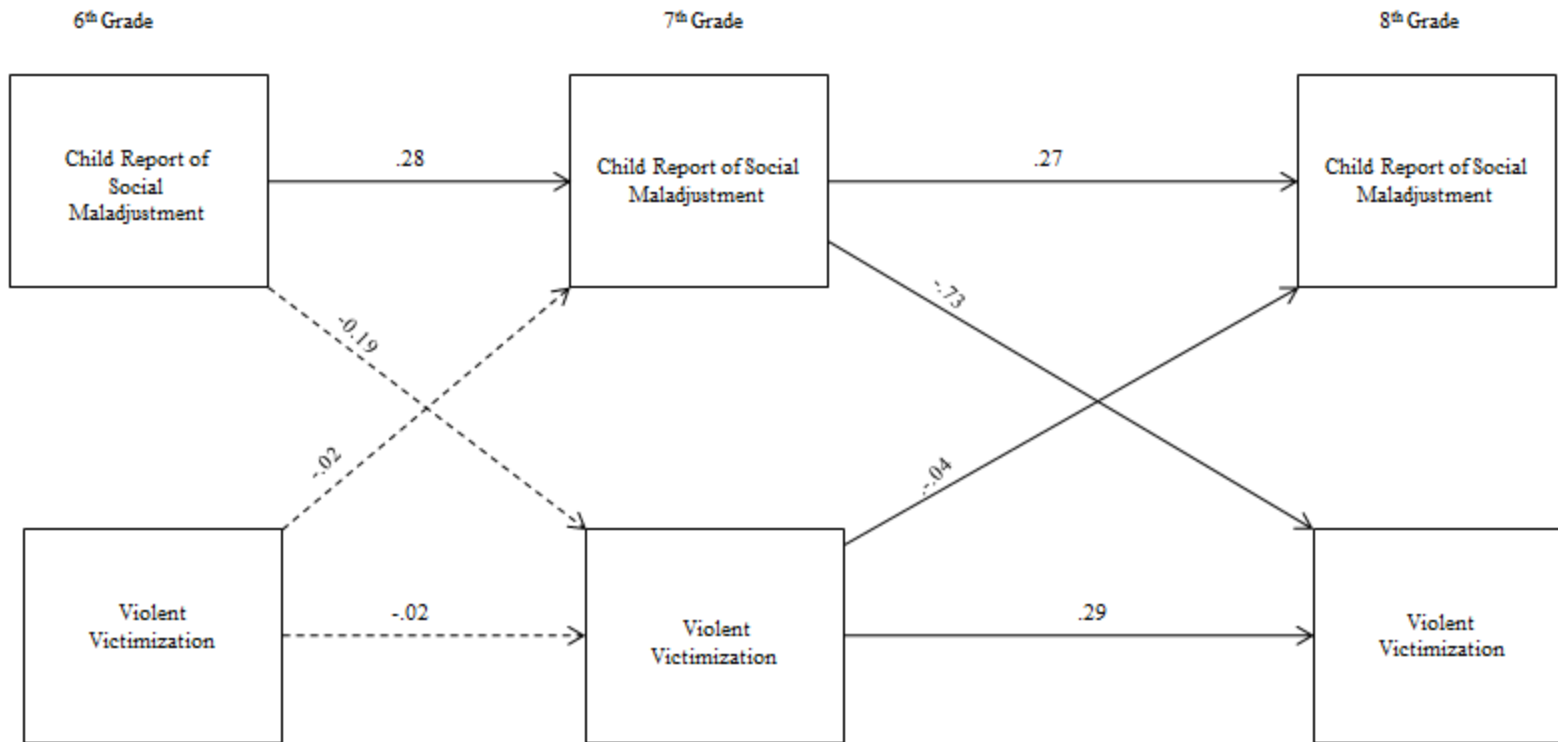


Figure 8. Transactional model: Child report of child social maladjustment and violent victimization. Solid lines indicate significant ($p \leq .05$) relationships. Dashed lines indicate nonsignificant ($p \geq .05$) relationships.

by violence in 7th grade was significantly negatively associated with social maladjustment in 8th grade, unstandardized path coefficient = $-.04$, $SE = .01$, $p < .01$. These results suggest that social maladjustment in 6th grade was not related to victimization in 7th grade, but children who rated themselves as more socially maladjusted in 7th grade actually experienced less violence in 8th grade.

Parent Report of Social Maladjustment and Witnessing Violence

The same path model was also estimated for parent report of their child's social maladjustment (see Figure 9). Parent report of child social maladjustment in 6th grade was not significantly related to witnessing violence in 7th grade, unstandardized path coefficient = -1.56 , $SE = .99$, $p > .05$. However, social maladjustment in 7th grade was significantly positively related to witnessing violence in 8th grade, unstandardized path coefficient = 2.35 , $SE = .92$, $p < .05$. Furthermore, while witnessing violence in 6th grade was not significantly related to social maladjustment in 7th grade, unstandardized path coefficient = $.00$, $SE = .00$, $p > .05$, witnessing violence in 7th grade was significantly negatively associated with social maladjustment in 8th grade, unstandardized path coefficient = $-.01$, $SE = .00$, $p < .05$. These results were dissimilar to the findings for child report of social maladjustment, such that parents who rated their children as more socially maladjusted in 7th grade witnessed more violence in 8th grade, but this relationship is not true for 6th to 7th grade.

Parent Report of Social Maladjustment and Victimization by Violence

Finally, the model was tested for parent report of child social maladjustment and victimization by violence (see Figure 10). Results indicated that parent report of child social maladjustment in 6th grade was not significantly related to victimization in 7th

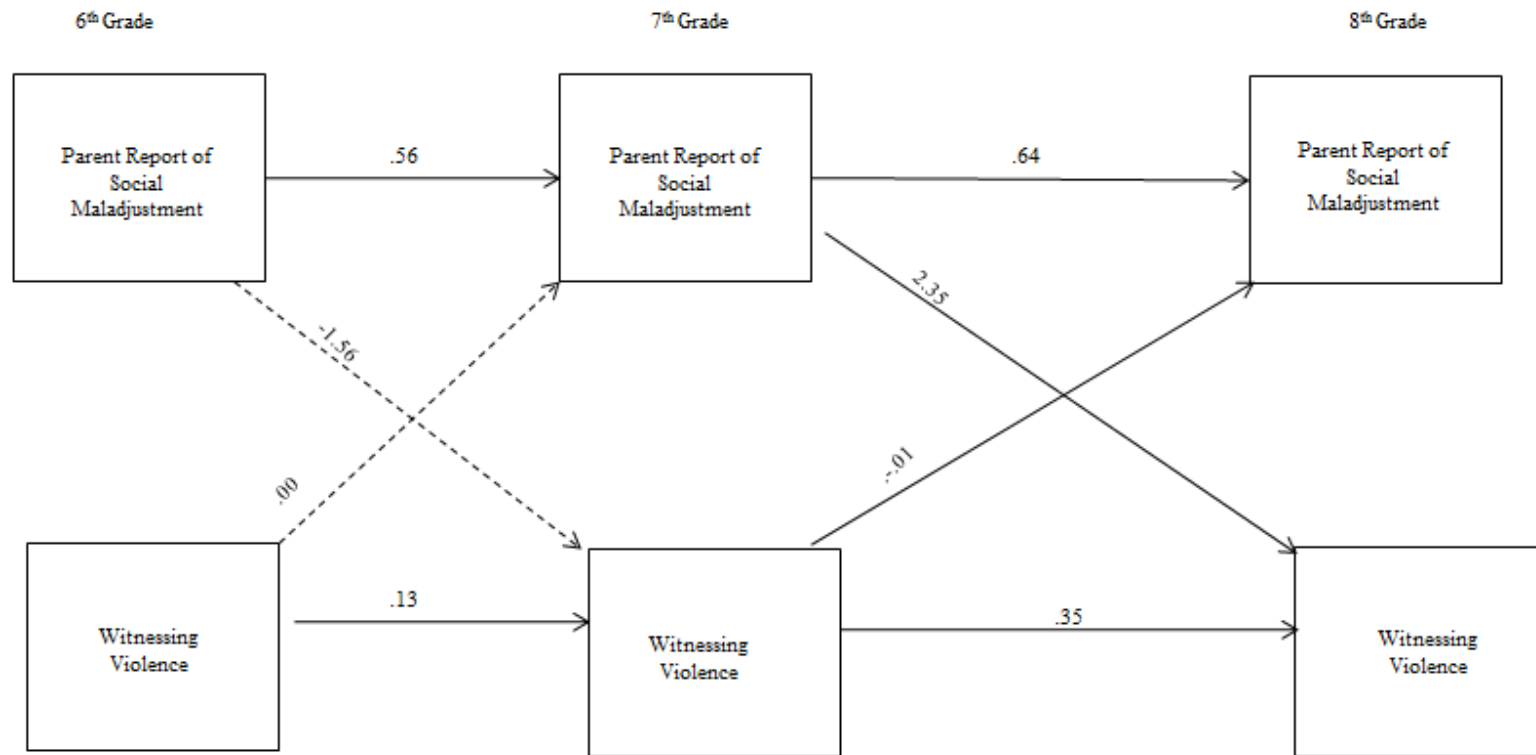


Figure 9. Transactional model: Parent report of child social maladjustment and witnessing violence. Solid lines indicate significant ($p \leq .05$) relationships. Dashed lines indicate nonsignificant ($p \geq .05$) relationships.

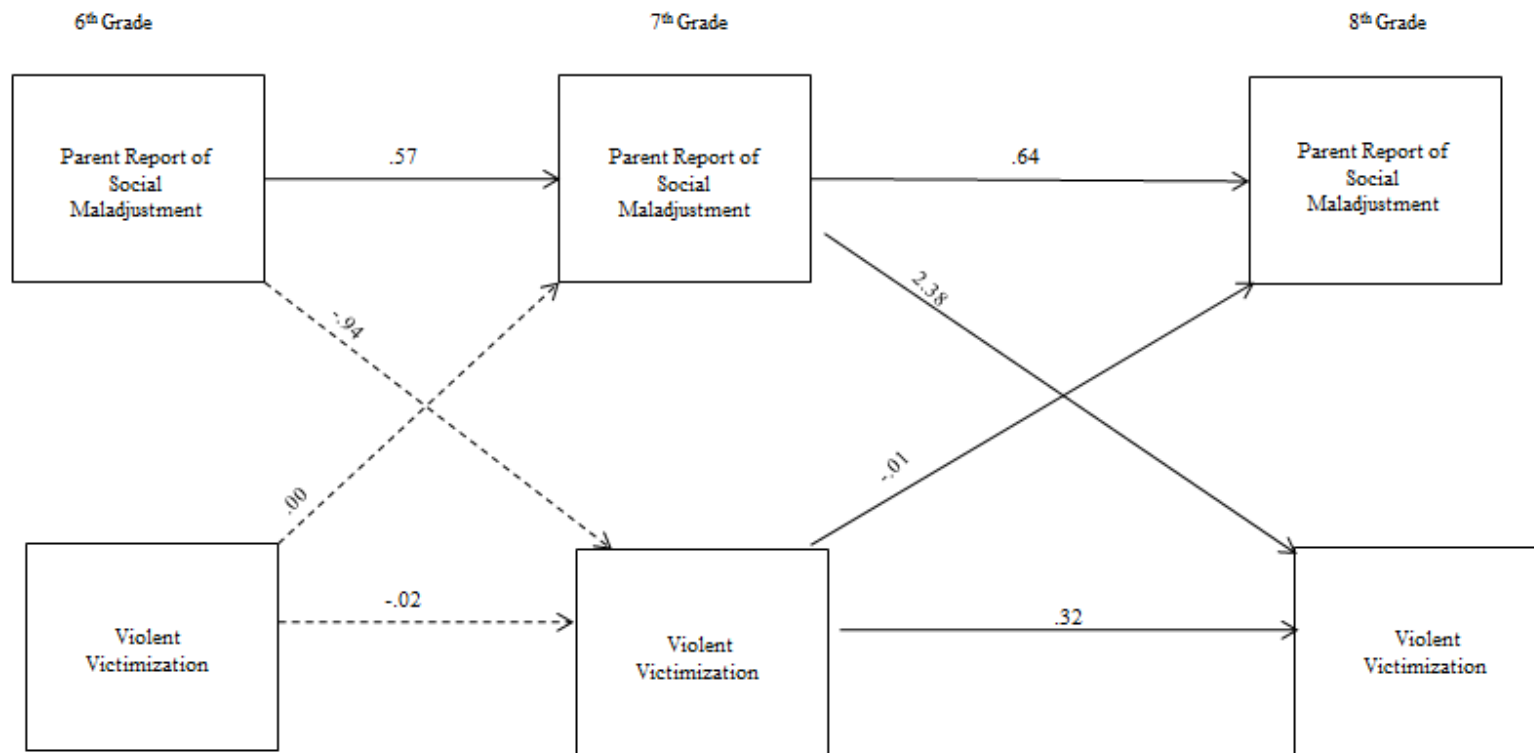


Figure 10. Transactional model: Parent report of child social maladjustment and violent victimization. Solid lines indicate significant ($p \leq .05$) relationships. Dashed lines indicate nonsignificant ($p \geq .05$) relationships.

grade, unstandardized path coefficient = $-.94$, $SE = .58$, $p > .05$. However, social maladjustment in 7th grade was significantly positively related to victimization in 8th grade, unstandardized path coefficient = 2.38 , $SE = .44$, $p < .01$. Furthermore, while victimization in 6th grade was not significantly related to social maladjustment in 7th grade, unstandardized path coefficient = $.00$, $SE = .00$, $p > .05$, victimization in 7th grade was significantly negatively associated with social maladjustment in 8th grade, unstandardized path coefficient = $-.01$, $SE = .00$, $p < .01$. These results revealed that parents who rated their child with more problems in social maladjustment in 7th grade were victimized by more violence in 8th grade, but this relationship was not true for 6th to 7th grade.

CHAPTER FIVE

DISCUSSION

The broad purpose of this study was to investigate the relationship between exposure to community violence and the social maladjustment within and across the middle school years (i.e., 6th to 8th grade) in a low income urban sample of African American youth. Specifically, the study aimed to test emotion dysregulation as a possible mechanism that explained the relationship between violence exposure and social maladjustment. Moreover, by looking in the relationship over time, this study also had the goal of examining the transactional or “self-perpetuating” relationship between exposure to community violence and social maladjustment.

Exposure to Violence and Social Maladjustment

The first goal of the present study was to build on previous research that has linked exposure to community violence to a variety of negative effects, such as internalizing disorders, behavior problems, and PTSD (Fowler et al., 2009), by examining the outcome of social maladjustment. This outcome has been largely overlooked in the community violence literature, yet research from other types of trauma suggests that it may be important to examine. Peer relationships and social functioning are not only important in the middle school years, as adolescents begin to develop self-concept and identity in relation to others, but social adjustment is also closely linked to development of psychopathology (Dougherty, 2006; Parker & Asher, 1987).

Contrary to our hypotheses, the present study found that exposure to community violence was not consistently linked to social maladjustment. In fact, results demonstrated when the relationship between exposure to community violence and social maladjustment was significant, it was more often in the opposite direction of what was hypothesized, such that children experiencing more violence exposure had lower levels of social maladjustment, particularly in the 8th grade. The only positive relationship between violence exposure and social maladjustment was found for witnessing violence and parent report of social maladjustment in 6th and 7th grades. Children who reported witnessing more violence in 6th grade were rated as more socially maladjusted in both 6th and 7th grade by their parents.

These results suggest that urban African American youth in low income and high violence neighborhoods may not be rejected by their peers or have difficulty forming social relationships, but their negative experiences may actually help them connect with others. Specifically, the socialization experiences of these children may mean that more violence exposure is related to more positive interactions with others through the “social cohesion” that is often found in disadvantaged neighborhoods (Jencks & Mayer, 1990). In other words, exposure to violence may become normative and not lead to problems in social adjustment.

Moreover, some have theorized that that youth exposed to chronic violence adapt to it rather than be overwhelmed by it. Children living in high crime areas become psychosocially desensitized from repeated exposure to violence which protects them emotional distress and the consequent negative effects (Garbarino, Kostelny, & Dubow, 1991). Ng-Mak and colleagues (2002, 2004) describe youth exposed to violence as

developing a pathologic adaptation to violence, such that consistent exposure leads to beliefs that normalize violence. This is contrary to the traumatic stress paradigm of violence that many researchers have suggested, in which assumes that children exposed to greater levels of violence will have worse outcomes. As children in violent communities move through development, they begin to realize that if they normalize the violence they are seeing in their everyday lives, they will become less affected by it (Ng-Mak, Salzinger, Feldman, & Stueve, 2002). While the mechanisms through which this adaptation to violence occurs in children are still unknown, specific coping or cognitive mechanisms may allow a child to become gradually desensitized to the realities of their violent environment (Ng-Mak., Salzinger, Feldman, & Stueve, 2004). Other researchers have found that as youths moved through adolescence, their use of approach coping strategies increased, especially within the context of family and peer stressors (Griffith, Dubow, & Ippolito, 2000). Consistent with this, the present study found greater number of these relations by 8th grade, such that witnessing or victimization by violence was related to no significant relationships or negative relationship in 8th grade. In this way, a child who experiences a great amount of violence may be seen as “well-adjusted” or having few social difficulties. The process of pathologic adaptation to violence is gradual and is more consistently found in child-reported distress, which further helps explains the results of the present study (Ng-Mak, Salzinger, Feldman, & Stueve, 2004).

Exposure to Violence and Emotion Dysregulation

This study also examined if exposure to violence impacted the emotion regulatory capacities of youth. Results demonstrated a strong relationship for both witnessing violence and violent victimization to emotion dysregulation, as measured by lability of

emotions using the time sampling technique which produced ESM-data. Overall, children who experienced greater community violence reported more difficulty regulating their emotions. This relationship was seen both cross-sectionally and longitudinally, however there was a slightly different pattern for witnessing violence versus violent victimization. While witnessing violence in 6th grade did not affect emotion dysregulation during that year or in the years following, witnessing violence in 7th and 8th grade was related to greater levels of emotion dysregulation in both 7th and 8th grade. Conversely, more victimization in 6th grade was related to more dysregulation in 6th grade and in 8th grade and more victimization in 8th grade was related to increased emotion dysregulation in 8th grade. However, victimization in 7th grade was not significantly related to emotion dysregulation in that year or the year following.

Thus, it appears that violence disrupts a child's ability to regulate their emotions. Children who are exposed to violence are characterized as reactive and experiencing intense emotions. They feel constantly "on edge" and unable to modulate their emotional responses to situations. These results build on previous research focusing on the role of emotion regulation in understanding psychopathology and how individuals react to the environment (Mash & Dozois, 2003). While the literature is extensive on the subject of emotion dysregulation and its relation to trauma, such as child maltreatment or violence in the home, only recently have researchers examined the effects of community violence. Most of the work in this area has looked at PTSD-like symptoms, such as emotional hyperreactivity, arousal, numbing, or intensity (Osofsky, 1995). When examining daily feeling states in urban African American adolescents, Sweeney and colleagues (2011) found that exposure to violence predicted more variability in certain feeling states (e.g.,

contented, hostile, anxious, and dysphoric) in 7th and 8th graders cross-sectionally, but these relationships did not hold over time. By combining specific feeling states into a single emotion dysregulation variable, the current study may have been better able to capture the dysregulation the youths were experiencing across several mood states. Moreover, the previous researchers did not examine the effects of witnessing versus victimization separately, which may also explain the differences in results. Together with past research, these findings from the present study suggest that future research should more closely examine how victimization and witnessing differentially affect the emotional regulatory capacities of youth, especially as they move through adolescence.

Emotion Dysregulation to Social Adjustment

Although previous research has supported the idea that difficulties in the emotional realm are related to adjustment problems and psychopathology in youth and adolescence (e.g., Bohnert, Crnic, & Lim, 2003; Katz, Hessler, & Anest, 2007; Silk, Steinberg, & Morris, 2003), the results of present study did not find consistent relationships between emotion dysregulation and social maladjustment. The results demonstrated that while parents reported their child's emotion dysregulation was related to more social maladjustment cross-sectionally in 6th and 7th grade, child report of social maladjustment did not show the same pattern. In fact, greater levels of emotion dysregulation was only related to child report of their social maladjustment in 7th grade. Thus, it seems as if children do not perceive changes in their emotion as affecting their social relationships. This could be explained by research that suggests that relationships between emotionality or emotion regulation and later social functioning weaken with age (Eisenberg et al., 1997). Older adolescents' friendships and social relationships may

depend on more complex factors than their emotions. Furthermore, it is also possible that negative emotionality is a better predictor of social functioning than emotional intensity (Eisenberg et al., 1997). Future research should examine both negative and positive emotions, as well as lability when studying social adjustment in adolescence.

The Mediating Role of Emotion Dysregulation

In addition to understanding the direct relationships between exposure to community violence to social maladjustment and emotion dysregulation, this present study attempted to identify causal pathways. Specifically, emotion dysregulation was examined as a mediator in the relationship between exposure to violence and social maladjustment. Although previous research has found emotion regulation to be important in understanding the relationship between exposure to community violence and social adjustment (Kelly, Schwartz, Gorman, and Nakamoto, 2008; Schwartz & Proctor, 2000), these studies were limited by not focusing on African American youth or examining outcomes longitudinally. Results of the present study did not suggest mediation, as this study found only an indirect influence of victimization on parent-report of child social maladjustment through emotion dysregulation in 6th grade in the expected direction. However, witnessing violence was partially mediated by emotion dysregulation, leading to less child reported social maladjustment in two instances, which was not in the expected direction. Thus, it seems as if the mechanism of emotion dysregulation in the relationship between exposure to community violence and social maladjustment is complex and may function in explaining both positive and negative outcomes.

While there are several possible explanations for the failure to find emotion dysregulation as a mediator, it seems that it may be best explained by the inconsistent findings for social maladjustment in these youth, as explained above. Moreover, other researchers have discussed that the difficulty in finding significant mediations in the relationship between community violence and childhood maladjustment may be related to the variability in the expression of risk or protective factors found in children (Salzinger, Feldman, Rosario, & Ng-Mak, 2010). Because children who experience community violence may adapt in various ways and may depend on other factors in their environment (e.g., family, school, community), a specific individual level factor, such as emotion dysregulation, may not be strong enough to explain outcomes. Thus, future research should examine multiple mediators at various ecological levels when examining mechanisms.

Nevertheless, these findings still have important developmental and clinical implications for youth exposed to violence. Because emotion regulation skills are known to influence adaptive and maladaptive functioning (Frederickson, 2001), it is important for these skills be targeted in prevention and intervention programs. While emotion regulatory skills begin to develop at a young age and are influenced by interactions with caregivers (Keenan, 2000), this study demonstrates that they are also affected by experiences throughout childhood and early adolescence. Children who experience stress, especially intense and pervasive stress such as violence, are in risk for becoming dysregulated. This emotional dysregulation then leads to difficulties with their social interactions and relationships (Flavell, Flavell, & Green, 2001). While this study did not find evidence for this specific model, other researchers have found that difficulties in

regulation emotions is linked to other pathology in African American youth, such as aggression and PTS (Carey, Cottingham, & Rollins, 2011; Ortiz, Richards, Kohl, & Zaddach, 2008). In this way, it is necessary for psychologists to target emotion regulation in African American youth exposed to violence. It is not enough to try to change outcomes, as it is also through understanding and modifying mechanisms that bring about these outcomes that we can encourage positive development and resilience for children in risk.

Self-Perpetuating Cycle

In their development, children not only are affected by, but also affect their environments. The complexity of child development means variables often relate in intricate ways, such that many variables may have bidirectional or transactional relationships. In this way, this study's final aim was to examine the possible transactional relationship between exposure to violence and social maladjustment. It was hypothesized that not only would exposure to violence cause children more social difficulties, but that this social maladjustment would lead children to be exposed to more violence. However, the results were not as consistent as predicted. For child report of social maladjustment, children who had more social difficulties in 6th grade witnessed more violence in 7th grade. Yet, children who were more socially maladjusted in 7th grade actually were less victimized by violence in 8th grade. For parent report of their child's social maladjustment, different relationships were found. In particular, social maladjustment in 7th grade was related to both increased witnessing and victimization in 8th grade.

While these results are complex, they build on previous research that found a reciprocal relationship between victimization and peer rejection (Kelly et al., 2008). It may be that children who see themselves as having poor relationships with peers early in middle school may be in risk for witnessing violence because they do not have the social support that may protect them from exposure or they may be seeking out dangerous situations (Kelly et al., 2008). Conversely, children in 7th grade who see themselves as socially maladjusted may be protected from later victimization because they not engrossed in the social and violent climate of their middle school and thus, not targeted. However, different results were found for parent report of social maladjustment, which suggests that that parents' understanding of their child's social adjustment diverges from the child report. This finding is common in the literature, especially as children begin to move from childhood to adolescence (Sourander, Helstela, & Helenius, 1999). Moreover, because our measures differed for child report and parent report, we may have been capturing different aspects of social maladjustment that influenced these differential findings. Further research should attempt to clarify these transactional and reciprocal relationships, as well as try to understand what other variables may be explaining their interactions.

Limitations, Strengths, and Future Directions

Before attempting to understand the implications of the results, there are several limitations that should be considered. First, the sample used in this study was a group of African American adolescents growing up in low-income, high violence neighborhoods in Chicago. While the experiences of these youth are certainly important to examine, the findings of this study have limited external validity. It is difficult to generalize the

findings of this study to other groups, such as those who experience different types of trauma or who live in different environments. Future research should examine similar models with diverse samples, including age, ethnicity, and culture.

Another limitation of this study concerns measurement. While a multi-reporter method was used to conceptualize the outcome of social maladjustment, the constructs of exposure to violence and emotion dysregulation were measured only by child-report. Although adolescents are thought to be accurate reporters on themselves and their own experiences, it is difficult to know if they have the appropriate insight to report on their own emotions as they occur. As mentioned previously, the construct of emotion dysregulation is incredibly complex and it is unclear if we were truly able to best capture the participants' ability to regulate emotion through our operationalization and use of ESM data. Additional parent-report or teacher-report measures may have provided a more complete picture of the child's functioning in several settings, as well as offer information about how different individuals in the child's life diverge in their reporting.

The final limitation of the study concerns the research design and statistical analysis. While the study followed the participants longitudinally over three years, causal inferences are still difficult to be drawn from this data, as none of the variables were manipulated. Furthermore, no alternate models using all variables were tested. It is very possible that other variables or constructs that were not measured in this study may help explain the relations between exposure to violence and social adjustment. While transactional models were tested for some of the variables, future studies should aim to test other plausible models that take into account additional environmental, individual, and family factors, as well as their interactions.

Even with these limitations, the current study has several strengths. This is one of the first studies to examine the construct of social adjustment in relation to African American youth's exposure to community violence. Many studies have focused on other outcomes, but social adjustment is an important indicator for future psychopathology and should be continued to be a focus for both researchers and clinicians. While results from this study were equivocal, further research should continue to examine social maladjustment in violence-exposed youth over time, as it is unclear if their coping strategies will allow them continue to buffer themselves from negative outcomes over time. Moreover, examining mediating variables is an important step in our understanding of **how** violence affects children's development. This knowledge can inform both interventions and future research (Buckner, Beardslee, & Bassuk, 2005). Future work should continue to examine mechanisms of the relationship between violence exposure and outcomes, as well as possible moderators that may influence a child's risk or resilience.

An additional strength is seen in the measurement of emotion dysregulation through the use of ESM data. Because emotions can be fleeting and difficult to report on, it is important to capture the moment-to-moment changes in an individual's emotions in measuring their regulatory skills. While other researchers have relied on questionnaire data to measure emotion dysregulation, this study was able to use an "in vivo" measure of the participants' emotions, in which they were able to report on them as they were occurring. Future researchers should continue to use such "real life" variables to build on the ecological validity of their findings.

A major strength of this study is in both its design and analysis. Few studies have been able to follow such a large sample of in-risk youth over a time period of several years in their attempt to understand outcomes. While this study cannot prove causality, the longitudinal design of the present study over a three-year-period furthers our knowledge about the developmental course of children exposed to violence. Additionally, very few researchers have examined the differences in witnessing violence versus being victimized by violence in the same study, especially longitudinally. As the results from this study were inconsistent, it appears that effects of violence proximity may vary by outcome measured (Fowler et al., 2009), demonstrating that this is an important distinction for both researchers and clinicians to make when understanding outcomes.

Furthermore, child development is complex and researchers should strive to use more sophisticated methods of analysis. The present study used SEM to examine both the hypothesized mediational and transactional models, which is considered a superior analytical approach (Iacobucci, Saldanha, & Deng, 2007). Finally, the transactional model examined in the present study was a start in understanding how variables may interact with each other, but future research should continue to look in changes over time, nonlinear approaches, and person-centered analyses to capture the dynamic and intricate pathways of youth development (Lynch, 2003).

Conclusions and Implications

In summary, this study was one of the first to examine emotion dysregulation as possible mediator in the relationship between exposure to community violence and social adjustment in a sample of low-income, urban African American youth. Results suggest

while community violence exposure appears to cause children to have difficulties with emotion dysregulation, the relationship with social adjustment is more complex.

Children who are exposed to community violence, both through victimization and witnessing, appear to be coping in some way that allows them to adapt to community violence, buffering their risk for maladjustment. These data suggest a need for further research on both mediators and moderators in order to understand resilience and vulnerability. This is important for clinical prevention and intervention work, as they should not only focus on reducing the risk of psychopathology for violence-exposed youth, but also factors that may promote resilience. Similarly, it may be important for these programs to focus on emotion regulation skills, as well as other areas of emotionality, such as emotion understanding and emotion expression, with the hopes that increasing emotional competence will lead to more positive outcomes.

Finally, it seems there are certain periods in development in which being more socially maladjusted may put a youth in risk for more exposure to violence. This transactional relationship between exposure to violence and social maladjustment suggests that both clinical and community-based preventions should target socially maladjusted youth in order to help promote positive adjustment and remove them from the cycle of violence that is too common in low-income, urban communities.

REFERENCES

- Achenbach, T. M. (1991). *Manual for the child behavior checklist/4–18 and 1991 profile*. Burlington: University of Vermont, Department of Psychiatry.
- Argyle, M., & Lu, L. (1990). Happiness and social skills. *Personality and Individual Differences*, 11(12), 1255–1261.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182.
- Bell, C. C., & Jenkins, E. J. (1993). Community violence and children on Chicago's Southside. *Psychiatry: Interpersonal and Biological Processes*, 56(1), 46–54.
- Bender, J. A., & Roberts, M. C. (2009). Exposure to violence, perceived peer relationships, and corresponding psychological sequelae. *Journal of Child and Family Studies*, 18(3), 350–355.
- Bohnert, A. M., Crnic, K. A., & Lim, K. G. (2003). Emotional competence and aggressive behavior in school-age children. *Journal of Abnormal Child Psychology*, 31(1), 79–91.
- Bolger, K. E., Patterson, C. J., & Kupersmidt, J. B. (1998). Peer relationships and self-esteem among children who have been maltreated. *Child Development*, 69(4), 1171–1197.
- Boxer, P., Morris, A. S., Terranova, A. M., Kithakye, M., Savoy, S. C., & McFaul, A. F. (2008). Coping with exposure to violence: Relations to emotional symptoms and aggression in three urban samples. *Journal of Child and Family Studies*, 17, 881–893.
- Buckner, J. C., Beardslee, W. R., & Bassuk, E. L. (2004). Exposure to violence and low-income children's mental health: Direct, moderated, and mediated relations. *American Journal of Orthopsychiatry*, 74(4), 413.
- Buka, S. L., Selner-O'Hagan, M. B., Kindlon, D. J., & Earls, F. J. (1997). *The "My Exposure to Violence Interview" administration and scoring manual, Version 3*. Boston, MA: Harvard School of Public Health.

- Buckner, J. C., Mezzacappa, E., & Beardslee, W. R. (2003). Characteristics of resilient youths living in poverty: The role of self-regulatory processes. *Development and Psychopathology*, 15(1), 139–162.
- Carey, D. C., Cottington, A. M., & Rollins, M. (2011). *Aggression: Normative beliefs, feeling states, and gender differences*. Unpublished manuscript.
- Cicchetti, D., & Toth, S. L. (1995). A developmental psychopathology perspective on child abuse and neglect. *Journal of the American Academy of Child & Adolescent Psychiatry*, 34(5), 541–565.
- Clare, A. W., Corney, R. H., & Cairns, V. E. (1984). Social adjustment: The design and use of an instrument for social work and social work research. *British Journal of Social Work*, 14(4), 323–336.
- Cole, P. M., Martin, S. E., & Dennis, T. A. (2004). Emotion regulation as a scientific construct: Methodological challenges and directions for child development research. *Child Development*, 75(2), 317–333.
- Cole, P. M., Michel, M. K., & Teti, L. O. (1994). The development of emotion regulation and dysregulation: A clinical perspective. *Monographs of the Society for Research in Child Development: The Development of Emotion Regulation: Biological and Behavioral Considerations*, 59, 73–100.
- Crick, N. R., & Dodge, K. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin*, 115(1), 74.
- Dodge, K. A., Lochman, J. E., Harnish, J. D., Bates, J. E., & Pettit, G. S. (1997). Reactive and proactive aggression in school children and psychiatrically impaired chronically assaultive youth. *Journal of Abnormal Psychology*, 106(1), 37–51.
- Dougherty, L. R. (2006). Children's emotionality and social status: A meta-analytic review. *Social Development*, 15(3), 394–417.
- Eisenberg, N., Cumberland, A., Spinrad, T. L., Fabes, R. A., Shepard, S. A., . . . Guthrie, I. K. (2001). The relations of regulation and emotionality to children's externalizing and internalizing problem behavior. *Child Development*, 72(4), 1112–1134.
- Eisenberg, N., Fabes, R. A., Bernzweig, J., & Karbon, M. (1993). The relations of emotionality and regulation to preschoolers' social skills and sociometric status. *Child Development*, 64(5), 1418–1438.

- Eisenberg, N., Fabes, R. A., Guthrie, I. K., & Reiser, M. (2000). Dispositional emotionality and regulation: Their role in predicting quality of social functioning. *Journal of Personality and Social Psychology*, 78(1), 136–157.
- Eisenberg, N., Fabes, R. A., Shepard, S. A., Murphy, B. C., Guthrie, I. K., . . . Maszk, P. (1997). Contemporaneous and longitudinal prediction of children's social functioning from regulation and emotionality. *Child Development*, 68(4), 642–664.
- Farver, J. A. M., Xu, Y., Eppe, S., Fernandez, A., & Schwartz, D. (2005). Community violence, family conflict, and preschoolers' socioemotional functioning. *Developmental Psychology*, 41(1), 160–170.
- Finkelhor, D., Turner, H., Ormrod, R., Hamby, S. L., & Kracke, K. (2009). *Children's exposure to violence: A comprehensive national survey*. Washington, DC: Office of Juvenile Justice and Delinquency Prevention, U.S. Department of Justice.
- Fitzpatrick, K. M., & Boldizar, J. P. (1993). The prevalence and consequences of exposure to violence among African American youth. *Journal of the American Academy of Child & Adolescent Psychiatry*, 32(2), 424–430.
- Fowler, P. J., Tompsett, C. J., Braciszewski, J. M., Jacques Tiura, A. J., & Baltes, B. B. (2009). Community violence: A meta-analysis on the effect of exposure and mental health outcomes of children and adolescents. *Development and Psychopathology*, 21(1), 227–259.
- Furr, R. M. (1998). A multimodal analysis of personal negativity. *Journal of Personality and Social Psychology*, 74(6), 1580.
- Garbarino, J., Kostelny, K., & Dubow, N. (1991). What children can tell us about living in danger. *American Psychologist*, 46(4), 376–383.
- Gifford-Smith, M. E., & Rabiner, D. L. (2004). Social information processing and children's social adjustment. In J. B. Kupersmidt & K. A. Dodge (Eds.), *Children's peer relations: From development to intervention* (pp. 61–79). Washington, DC: American Psychological Association.
- Gladstein, J., Rusonis, E. S., & Heald, F. P. (1992). A comparison of inner-city and upper-middle class youths' exposure to violence. *Journal of Adolescent Health*, 13(4), 275–280.
- Gorman-Smith, D., Henry, D. B., & Tolan, P. H. (2004). Exposure to community violence and violence perpetration: The protective effects of family functioning. *Journal of Clinical Child and Adolescent Psychology*, 33(3), 439–449.

- Griffith, M. A., Dubow, E. F., & Ippolito, M. F. (2000). Development and cross-situational differences in adolescents' coping strategies. *Journal of Youth and Adolescence*, 29(2), 183–204.
- Hammack, P. L., Richards, M. H., Luo, Z., Edlynn, E. S., & Roy, K. (2004). Social support factors as moderators of community violence exposure among inner-city African American young adolescents. *Journal of Clinical Child and Adolescent Psychology*, 33(3), 450–462.
- Harteringer-Saudners, R. M., Rittner, B., Wieczorek, W., Nochajski, T., Rine, C. M., & Welte, J. (2011). Victimization, psychological distress and subsequent offending among youth. *Children and Youth Services Review*, 33(11), 2375–2385.
- Hubbard, J. A., & Coie, J. D. (1994). Emotional correlates of social competence in children's peer relationships. *Merrill-Palmer Quarterly: Journal of Developmental Psychology*, 40(1), 1–20.
- Iacobucci, D., Saldanha, N., & Deng, X. (2007). A meditation on mediation: Evidence that structural equation models perform better than regressions. *Journal of Consumer Psychology*, 17(2), 139–53.
- Jencks, C., & Mayer, E. (1990). The social consequences of growing up in a poor neighborhood. In L. J. L. McGeary & M. G. H. McGeary (Eds.), *Inner-city poverty in the united states* (pp. 111–186). Washington, DC: National Academy Press.
- Joreskog, K. G., & Sorbom, D. (1996). *LISREL 8 user's reference guide*. Lincolnwood, IL: Scientific Software International.
- Katz, L. F., Hessler, D. M., & Annest, A. (2007). Domestic violence, emotional competence, and child adjustment. *Social Development*, 16(3), 513–538.
- Kelly, B. M., Schwartz, D., Gorman, A. H., & Nakamoto, J. (2008). Violent victimization in the community and children's subsequent peer rejection: The mediating role of emotion dysregulation. *Journal of Abnormal Child Psychology*, 36(2), 175–185.
- Kliewer, W., Cunningham, J. N., Diehl, R., Parrish, K. A., Walker, J. M., . . . Mejia, R. (2004). Violence exposure and adjustment in inner-city youth: Child and caregiver emotion regulation skill caregiver-child relationship quality, and neighborhood cohesion as protective factors. *Journal of Clinical Child and Adolescent Psychology*, 33(3), 477–487.

- Kliewer, W., Lepore, S. J., Oskin, D., & Johnson, P. D. (1998). The role of social and cognitive processes in children's adjustment to community violence. *Journal of Consulting and Clinical Psychology, 66*(1), 199–209.
- Kliewer, W., Reid-Quinones, K., Shields, B. J., & Foutz, L. (2009). Multiple risks, emotion regulation skill, and cortisol in low-income African American youth: A prospective study. *Journal of Black Psychology, 35*(1), 24–43.
- Kline, R. B. (2010). *Principles and practice of structural equation modeling* (3rd ed.). New York, NY: Guilford.
- Kopp, C. B. (1989). Regulation of distress and negative emotions: A developmental view. *Developmental Psychology, 25*(3), 343–354.
- Kovacs, M. (1985). The Children's Depression Inventory. *Psychopharmacology Bulletin, 21*, 995–998..
- Kovacs, D. M., Parker, J. G., & Hoffman, L. W. (1996). Behavioral, affective, and social correlates of involvement in cross-sex friendship in elementary school. *Child Development, 67*(5), 2269–2286.
- Ladd, G. W. (1999). Peer relationships and social competence during early and middle childhood. *Annual Review of Psychology, 50*, 333–359.
- Larson, R. W., Moneta, G., Richards, M. H., & Wilson, S. (2002). Continuity, stability, and change in daily emotional experience across adolescence. *Child Development, 73*(4), 1151–1165.
- Larson, R. W., Raffaelli, M., Richards, M. H., Ham, M., & Jewell, L. (1990). Ecology of depression in late childhood and early adolescence: A profile of daily states and activities. *Journal of Abnormal Psychology, 99*(1), 92–102.
- Lopes, P. N., Salovey, P., Cote, S., Beers, M., & Petty, R. E. (2005). Emotion regulation abilities and the quality of social interaction. *Emotion, 5*(1), 113–118.
- Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development, 71*(3), 543–562.
- Lynch, M. (2003). Consequences of children's exposure to community violence. *Clinical Child and Family Psychology Review, 6*(4), 265–274.
- Marans S, & Adelman A. 1997. Experiencing violence in a developmental context. In J. Osofsky (Ed.), *Children in a Violent Society* (pp. 202–222). New York, NY: Guilford.

- Margolin, G., & Gordis, E. B. (2004). Children's exposure to violence in the family and community. *Current Directions in Psychological Science*, 13(4), 152–155.
- Margolin, G., & Vickerman, K. A. (2007). Posttraumatic stress in children and adolescents exposed to family violence: I. Overview and issues. *Professional Psychology: Research and Practice*, 38(6), 613–619.
- Martinez, P., & Richters, J. E. (1993). The NIMH community violence project: II. Children's distress symptoms associated with violence exposure. *Psychiatry: Interpersonal and Biological Processes*, 56(1), 22–35.
- Mash, E. J., & Dozois, D. J. A. (2003). Child psychopathology: A developmental-systems perspective. In E. J. Mash & R. A. Barkley (Eds.), *Child psychopathology* (2nd ed., pp. 3–71). New York, NY: Guilford Press.
- McGee, Z. T. (2003). Community violence and adolescent development: An examination of risk and protective factors among African American youth. *Journal of Contemporary Criminal Justice*, 19(3), 293–314.
- Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simmons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US youth: Prevalence and association with psychosocial adjustment. *Journal of the American Medical Association*, 285, 2094–2100.
- Ng-Mak, D. S., Salzinger, S., Feldman, R. S., & Stueve, A. C. (2002). Normalization of violence among inner-city youth: A formulation of research. *American Journal of Orthopsychiatry*, 72, 92–101.
- Ng-Mak, D. S., Salzinger, S., Feldman, R. S., & Stueve, A. C. (2004). Pathologic adaptation to community violence among inner-city youth. *American Journal of Orthopsychiatry*, 74(2), 196–208.
- Ortiz, V., Richards, M., Kohl, K., & Zaddach, C. (2008). Trauma symptoms among urban African American young adolescents: A study of daily experience. *Journal of Child & Adolescent Trauma*, 1(2), 135–152.
- Osofsky, J. D. (1995). The effects of exposure to violence on young children. *American Psychologist*, 50(9), 782.
- Parker, J. G., & Asher, S. R. (1987). Peer relations and later personal adjustment: Are low-accepted children in risk? *Psychological Bulletin*, 102(3), 357–389.

- Preacher, K. J., & Hayes, A. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891.
- Randolph, S. M., Koblinsky, S. A., & Roberts, D. D. (1996). Studying the role of family and school in the development of African American preschoolers in violent neighborhoods. *Journal of Negro Education*, 65(3), 282–294.
- Richters, J. E., & Martinez, P. (1993). The NIMH community violence project: I. Children as victims of and witnesses to violence. *Psychiatry: Interpersonal and Biological Processes*, 56(1), 7–21.
- Salzinger, S., Feldman, R. S., Rosario, M., & Ng-Mak, D. (2010). Role of parent and peer relationships and individual characteristics in middle school children's behavioral outcomes in the face of community violence. *Journal of Research on Adolescence*, 21(2), 395–407.
- Salzinger, S., Feldman, R. S., Stockhammer, T., & Hood, J. (2002). An ecological framework for understanding risk for exposure to community violence and the effects of exposure on children and adolescents. *Aggression and Violent Behavior*, 7(5), 423–451.
- Scarpa, A., Fikretoglu, D., Bowser, F., Hurley, J. D., Pappert, C. A., . . . Van Voorhees, E. (2002). Community violence exposure in university students: A replication and extension. *Journal of Interpersonal Violence*, 17(3), 253–272.
- Schwartz, D., & Proctor, L. J. (2000). Community violence exposure and children's social adjustment in the school peer group: The mediating roles of emotion regulation and social cognition. *Journal of Consulting and Clinical Psychology*, 68(4), 670–683.
- Silk, J. S., Shaw, D. S., Forbes, E. E., Lane, T. L., & Kovacs, M. (2006). Maternal depression and child internalizing: The moderating role of child emotion regulation. *Journal of Clinical Child and Adolescent Psychology*, 35(1), 116–126.
- Silk, J. S., Steinberg, L., & Morris, A. S. (2003). Adolescents' emotion regulation in daily life: Links to depressive symptoms and problem behavior. *Child Development*, 74(6), 1869–1880.
- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. *Sociological Methodology*, 13, 290.

- Sourander, A. S., Helstela, L., & Helenius, H. (1999). Parent–adolescent agreement on emotional and behavioral problems. *Social Psychiatry and Psychiatric Epidemiology*, 34, 657–663.
- Southam-Gerow, M. A., & Kendall, P. C. (2002). Emotion regulation and understanding: Implications for child psychopathology and therapy. *Clinical Psychology Review*, 22(2), 189–222.
- Stein, B. D., Jaycox, L. H., Kataoka, S., Rhodes, H. J., & Vestal, K. D. (2003). Prevalence of child and adolescent exposure to community violence. *Clinical Child and Family Psychology Review*, 6(4), 247–264.
- Stocker, C., & Dunn, J. (1990). Sibling relationships in childhood: Links with friendships and peer relationships. *British Journal of Developmental Psychology*, 8(3), 227–244.
- Sweeney, C. K., Goldner, J., & Richards, M. H. (2011). Exposure to community violence and daily feeling states among urban Africa American youth. *Journal of Prevention and Intervention in the Community*, 39(2), 114–131.
- Thompson, R. A. (1990). Emotion and self-regulation. In R. A. Thompson (Ed.), *Socioemotional development: Nebraska symposium on motivation, 1988* (pp. 367–467). Lincoln: University of Nebraska Press.
- Thompson, R. A. (1994). Emotion regulation: A theme in search of definition. *Monographs of the Society for Research in Child Development*, 59(2–3), 25–52, 250–283.
- Tugade, M. M., & Fredrickson, B. L. (2007). Regulation of positive emotions: Emotion regulation strategies that promote resilience. *Journal of Happiness Studies*, 8(3), 311–333.
- van der Kolk, B. A. (2005). Developmental trauma disorder: Toward a rational diagnosis for children with complex trauma histories. *Psychiatric Annals*, 35(5), 401–408.

VITA

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